WHEN READING MUSIC IS NOT ENOUGH: USING ART SONG TO TEACH MEMORIZATION TO BASSOONISTS

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To my dad, the man who can't remember a thing.

To my mom, the woman who never forgets.

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This project would not have been possible without the help, support, and encouragement from professors, family, and friends. I would like to thank Professor Kathleen McLean for always encouraging me to pursue my interests and expand my education horizons in non-traditional ways. Additionally, Professor McLean has shown me the importance of making my happiness the number one priority and the importance of being the best person I am able to be that day.

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When Reading Music is Not Enough: Using Art Song to Teach Memorization to Bassoonists

The purpose of this project is to create a methods book for bassoonists consisting of excerpts of art songs; the book will be accompanied by written activities to reinforce concepts learned. The goal for the student will be to memorize the excerpts (with text) and develop the skills necessary to memorize music with greater facility. There is a need for this kind of methods book because an emphasis on memorization is not common with American wind players and will offer a new perspective on how to approach memorization.

Memorization is an important skill because it allows a deeper understanding of the music and performance. String players, pianists, percussionists, and vocalists are expected to memorize their recitals to create a better connection between audience and performer. The loss of a physical blockade created by the music allows the musician to create a more conversant relationship with the viewer. In addition to the visual component of performance, memorized material becomes a more natural expression. The level of concentration required of a memorized performance allows the musician to surpass the written music, creating a truly exceptional experience for everyone involved.

After conducting an informal survey among colleagues and peers, it became evident that wind players generally do not have confidence in their own ability to memorize music. This lack of skill has little to do with playing a wind instrument but rather a lack of practice, emphasis, and instruction. Other instruments offer memorization as a fundamental part of the learning process. Many string players attribute their memorization skills to the Suzuki Method, which includes both repetition and delayed reading as primary tenets of the method[1]

Vocalists are given the extra element of text to their memorization, which is both an additional thing to concern oneself with, but also a great aid. In 2007, a study led by Zehra

[1] Suzuki Association of the Americas, "About the Suzuki Method" https://suzukiassociation.org/teachers/twinkler/ (accessed 3/17/14).

Peynircioğlu proved that lyrics yielded the highest recall of more lyrics, melody, and title[2]. This methods book will use art song for exactly this reason; adding words to the melody will help with the memorization process. The words used in this methods book will be translated into English for ease of memory for the student; the words are supposed to act as a mnemonic tool more than artistic expression.

The selection of art songs will be based on tonality, contour, and repetition. The order of the songs will allow students to start with songs that have more linear lines, simulating scalar patterns that have been worked on in fundamentals, and then progress further into wider intervals and distant tonal areas.

In addition to a selection of art songs, the methods book will have guided tools to help students and teachers understand what works best for each student. Each student will have a different way of internalizing the music and producing a compelling performance, which is why it is necessary to not have a fixed strategy towards a finished product. These tools will include room to write in chords, extra staff to rewrite the melody as remembered, space to draw the contour of the melody, lines to write the text, etc. There will also be an audio component to the book so students may hear the excerpt.

In order to get a better idea of how people have learned in the past, I will survey a wide cross section of wind players (college-aged and older). In this survey, I will collect information on what instrument part they play, what strategies they have used to memorize for performance, and if they consider themselves successful at memorization. Collecting this data will help me understand what tools a student may want to use and develop.

My readings for this project will consist of both musical and non-musical articles pertaining to memory and retention. As someone who has always appreciated a cross-discipline style of learning, I want to be able to apply non-musical memorization research and strategies to

[2] Z. Peynircioglu, Rabinovitz, B., & Thompson, J., "Memory and Metamemory for Songs: The Relative Effectiveness of Titles, Lyrics, and Melodies as Cures for Each Other," *Psychology of Music* 36, no. 1 (2007).

the book to give a musically unbiased viewpoint. By creating new memory associations away from the musician's livelihood, a student may have greater success achieving their goals.

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Chapter 1: Introduction

"The ability to memorize music material is regarded as a fundamental skill in the performing musical arts.[1] This bold statement starts a dissertation written about teaching memorization to young string players. "Memorization of music occupies a place of considerable importance in the area of piano.[2] This introduction starts a dissertation about learning styles seen in group piano lessons. Memorization has been presumably intrinsic for many instrumentalists from the beginnings of their studies. The question that needs to be posed is, "Why does no one care whether or not wind players memorize music?"

Memory grand master Ed Cooke explained to journalist Jonathan Foer, "…even average memories are remarkably powerful if used properly.[3] It does not take a genius to memorize massive amounts of material it just takes deliberate thought and an interest in what one is learning. Psychologist K. Anders Ericsson explains in his research that superior memories do not come from savants, but rather from thousands of hours of training in the field[4] The question that is posed above will be answered in this dissertation.

My hypothesis for why wind players do not memorize stems from the origins of most wind players' educations. Most students start playing wind instruments with school band programs, which with group lessons. In group lessons, learns scales and small melodies from a book. These scales and melodies are performed together while reading the assigned method books. When not in group lessons, students play in band together. There is not an opportunity to play pieces without music because the emphasis for students is on ensemble playing. There is very

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[1] Jacob Michael Dakon."The Effects of Aural and Visual Strategies on the Memorization of Beginning-Level String Students: An Exploratory Study." The Ohio State University, 2011: 1.
[2] Eunice L. Rickey. "The Investigation to Observe the Effects of Learning Style on Memorization Approaches Used by University Group Piano Students When Memorizing Piano Literature." Ball State University, 2004: 1.
[3] Joshua Foer. *Moonwalking with Einstein*. New York: Penguin Press, 2011: 9.
[4] Foer, 53-54.

little emphasis on solo playing until the word “competition” shows up, giving solo playing and memorization a negative connotation.

In the music world, pianists, string players, and percussionists memorize hundreds upon hundreds of notes so they do not have to flip pages. Singers memorize music even though they have full access to flip pages as needed, but insist on memorizing in order to create a better connection with their audience and to be able to fully emote and convey text as well as the message. Whether or not memorization is necessary for wind players from a logistical standpoint, it is a skill that is invaluable in the learning process.

This dissertation has been designed mostly to encourage teaching memorization as another learning tool. The etude book has been designed to utilize different memorization styles so students can.

From a young age, children have been asked to memorize words and facts, from the alphabet to Martin Luther King Jr.’s “I Have a Dream” speech. The musical, lilting qualities of a student’s recitation show that music innately helps with memory of words. This document use words to evoke musical ideas. The etude book consists of twenty excerpts from various western art songs, which have been loosely translated in English. The addition of words is to act as one additional layer for remembering a piece.

The purpose of this document is to open up a dialogue about memorization.

Chapter 2: Non-Music related research

There are three main kinds of memory that will be discussed in this section: sensory memory, short term memory, and long term memory[5]. These three types of memory are built and solidified from one another and do not work independently. By understanding how each of these components work, we will have a better idea of how to activate all types of memory for best musical recall.

All memory starts with a stimulus. The stimulus is the object that will be remembered and processed using the five senses: sight, sound, taste, touch, and smell. By using the five senses, the sensory memory will begin. Sensory memory is engaged when nerves pertaining to each sense send information through impulses. The impulses contain features that get extracted and processed separately. As an example, when someone sees a person, different visual characteristics are processed in the sensory memory. This memory is retained for no more than a couple of seconds. It is safer to think of this kind of memory as perception rather than memory, and it acts as a stepping stone towards short term memory.

The journey to short term memory continues after the initial sensory memory. The combination of perceptual awareness, rehearsal, and focus of conscious awareness all combine to move from sensory memory to short term memory[6]. Short term memory is temporarily stored but has the potential to lead to long term memory. Generally, short term memory can store about seven items for twenty to thirty seconds[7]. McLeod's article discusses George Miller's The Magic Number Seven, explaining that the adult brain is able to remember approximately seven items two items. These seven items can chunk together smaller features in order to remember more

[5] Bob Snyder. Music and Memory: An Introduction. Cambridge, MA: MIT Press, 2000: 7.
[6] Snyder, 9.
[7] Saul McLeod, "Short Term Memory" http://www.simplypsychology.org/short-term-memory.html (accessed January 17 2015).

things simultaneously. As an example, if I saw a woman with dyed red hair often associated with older women, brown eyesapproximately five feet tall, I wouldn't try to remember all three of those characteristics, but I would say that this woman looks like my grandmother. Knowledge from long term memory can be used to chunk things together in short term.

The brain is designed to filter through information to decide what is worth remembering for an extended period of time and what is worth storing. Long term memory works together with short term memory to store information presumably forever. Repetition of short term memory creates long term memories and can also alter the preexisting memories. Long term memories are split between facts and motions, which is technically called implicit and explicit memories[8]. Explicit memories are described as memories that are "remembered": facts, directions, names, etc. Implicit memories are more related to motor motions that one does not have to think about while doing them: walking, biking, playing an instrument, etc.

The movements related to playing an instrument are remembered implicitly, but the music itself is remembered explicitly. This is where the issues lie for musicians while memorizing. While memorizing, there is no reason to limit oneself to just one kind of memory. Ideally, the performer has worked on a piece long enough to build the implicit memory from physical practice along with explicit memory by study and analysis. By continually studying and practicing, new features will come through and be added to the long term memory, strengthening the overall recall.

[8] Bruno Dubuc, "The Brain from Top to Bottom" thebrain.mcgill.ca (accessed 07/30/2014).

Music and rhythm have been commonly used as mnemonic devices for years. Epic poems were passed down through generations by using poetic devices[9]. Young children learn songs to memorize the alphabet by singing the letters of the alphabet to the tune of "Twinkle, Twinkle, Little Star Older students may have learned the uadratic quation by singing the equation to the tune of "Pop Goes the Weasel". Music reaches into the deep recesses of the brain to help organize and recall information that has been stored.

Dr. Henry L. Roediger III further explains to journalist Heidi Mitchell that information stored in the brain can use the innate structure in music for recall. The tune itself is not necessarily what is recalling the information, but rather the repetition built into most music. On the other side of the spectrum, researchers from American University in Washington DC look at the relationship between lyrics and melody. When learning a song, these two components are encoded separately but either can help with recall on a whole[10]. Before conducting their research, the scientists involved were split down the middle; some found the melody to help recall lyrics and some found the opposite.

The study shows that lyrics of a song were actually the most effective mnemonic for other components (melody and title). The discussion brings up the following idea: "One explanation might be the differences in trace strengths between the three components. By their very nature (e.g. titles are shorter than lyrics) or through more exposure (e.g. we may hear melody snippets more often without their lyrics than vice versa), melodies and titles could simply be more

[9] Heidi Mitchell, "Why Does Music Aid in Memorization?" http://www.wsj.com/articles/SB10001424052702304483804579284682214451364 (accessed January 16 2014).
[10] Z. Peynircioglu, Rabinovitz, B., & Thompson, J. "Memory and Metamemory for Songs: The Relative Effectiveness of Titles, Lyrics, and Melodies as Cures for Each Other." Psychology of Music 36, no. 1 (2007): 47.

memorable and thus lyrics would seem to be better cues for eliciting them than those two components would be for lyrics."[11]

The most interesting part of Peynircioğlu study is the lack of confidence the participants had in the results. The result in the experiment was that lyrics were the best cue for recalling the melody and title. Surprisingly, the researchers asked about the subjects comfort level while answering the questions and the subjects felt the most uneasy when given lyrics as a cue even though it was proven that they led to the best recall.

[11] Peynircioglu, 58.

Chapter 3: Music related research

James Francis Cooke brings up points about memorization in his 1948 book, *How to Memorize Music.* This book would be considered an early resource on music memorization that goes past the idea of musical analysis. As an educator and a pianist, Cooke puts forth basics to consider followed by more detailed concepts to put into action. Overall, his book has general ideas to think about, but has many tactics that are specific to pianists. His three foundational ideas are to vitalize, analyze, and test[12].

Cooke begins the book by talking about the importance of health, a positive attitude, and sleep in relation to success in memorization. All of these ideas are considered part of the vitality one needs to memorize. Health is not restricted to keeping the common cold away; Cooke goes into great deal about the importance of proper digestion and strong blood circulation through the body. Sleep has always been valuable to the learning and memory process[13], but neuroscientists have also proven that sleep helps with finger-tapping motor sequences[14].

Cooke delves further by explaining how people can works away from the keyboard. By means of very soft science, Cooke compares memorizing the characteristics of a person to memorizing characteristics of a piece. He picked eleven arbitrary physical characteristics for one to remember and concludes with the new person's name. then continues with naming twelve components of music that one can memorize as part of the analysis:

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[12] James Francis Cooke. *How to Memorize Music* (Bryn Mawr: Theodore Presser, 1948), 3.
[13] "Why Sleep Matters", http://healthysleep.med.harvard.edu/healthy/matters (accessed 8/8/14).
[14] Masako Tamaki, Tsung-Ren Huang, Yuko Yotsumoto, Matti Hämäläinen, Fa-Hsuan Lin, José E. Náñez, Takeo Watanabe, and Yuka Sasaki. "Enhanced Spontaneous Oscillations in the Supplementary Motor Area Are Associated with Sleep-Dependent Offline Learning of Finger-Tapping Motor-Sequence Task." *The Journal of Neuroscience* 33, no. 34 (2013): 13894-13902.

1. Key signature
2. Meter
3. Tempo
4. Dynamics
5. Melody
6. Harmony
7. Melodic Outline
8. Touch
9. Expression
10. Pedaling
11. Phrasing
12. Fingering[15]

The last component to Cooke's memorization mantra is to test the progress. He suggests that if you can play a section "eight to one hundred times from memory without a blunder," you have the section memorized[16] The iterations should alternate between memorized material and unrelated material to confirm that the music can be recalled after a distraction has occurred. In order to keep track of success, the student should use markers to count good run-throughs. Every time the student messes up, the markers are removed and the student must start their count again.

There are some fundamental issues with this testing method that should be addressed. Jennifer Mishra's 2011 study on memorization discusses four different strategies of memorization: holistic, segmented, serial, and additive[17] They are defined as follows:

Holistic – Repeatedly practicing from beginning to end

[15] Cooke, 10-12.
[16] Cooke, 12.
[17] Jennifer Mishra. "Influence of Strategy on Memorization Efficiency." *Music Performance Research* 4, (2011): 60-71.

Segmented – Practicing one part at a time, then segmenting the parts together

Serial – Practice from the beginning of the piece, restart when error occurs

Additive – Initially memorize one segment, then add consecutive measures until it encompasses the entire piece

In Mishra's findings, she has found that people can memorize most efficiently (time-wise) by using the holistic approach. The segmented approach was seen as second-most effective. Serial and additive memorization practices were seen as equally inefficient, taking approximately 50% longer than using the holistic approach[18]

Cooke's testing method does not specify what must happen after each "blunder" occurs. It suggests one must continue in the count in order to make their memorization achievement of eight perfect performances. Mishra's research shows that a holistic approach to memorization was the fastest route towards memorizing; however, Cooke has turned a holistic performance into a serial action. Cooke referred to his testing method as scientific, but really he intended to say it is concrete. Science would adjust the approach after seeing failure from the initial onset. There is a point in the scientific method in which one must analyze whether the procedure is yielding the results wanted. From there, the scientist would create a new experiment to see if they can get proper results. Cooke's failure to explain the importance of self-analysis early on could potentially prevent a student from moving forward.

The three fundamentals of memorization are left behind in the introduction. Cooke continues to talk about different tests one could use to make sure the music is fully branded into the brain: the ear test, the eye test, and the touch test. These ideas bring in aural, visual, and

[18] Mishra, 66.

kinesthetic ways of learning by asking the student to focus on these aspects of learning and comprehension. Cooke opines that the eye test, which consists of writing the music down on paper as you remember, is the most useful, while the ear test, being able to sing the melodies back, is both the easiest and hardest. The rest of the book is split into two sections: further findings from Cooke (includes anecdotes, a list of fallacies related to memorization, and more memorization tactics) and letters written to Cooke by a variety of musicians about their opinions about memorizing. The opinions of these musicians range wildly on the spectrum of memorization importance.

James Francis Cooke's memorization tactics are vast. As he mentions earlier in the book, he explain as many strategies as possible with the expectation that something will speak to the student based on their learning style and skills[19] Concepts such as visual breaking parts into smaller sections (only looking at two measures at a time while hiding the rest of the music), rewriting the music in slower durations (quarter note equals half note, etc.) and working backwards can be used universally no matter what instrument is being played. As I mentioned earlier, some of his tactics only lend themselves towards pianists. Ideas such as looking at the keyboard and spatially orienting oneself with the progression of the music cannot be translated into non-keyboard instruments because we cannot look at our instrument while we play and our hands do not shift enough to create spatial recognition.

Overall, *How to Memorize Music* has excellent core concepts to consider while teaching memorization. This book, among many books written primarily by musicians rather than researchers, include statistical evidence of what strategies work and what do not work. The exhaustive inclusion of examples of great musical minds could be seen as inspiring for few and discouraging for most. This book is most valuable in bullet point form and could be stripped away of its prose to offer a myriad of strategies for musicians.

[19] Cooke, 41-43.

Alfred John Goodrich's book, *Guide to Memorizing Music*, is a prototypical example of what James Francis Cooke referred to as a memorization book that only addresses musical analysis. Goodrich was considered an educator and an author but was not referenced as a performer in comparison to how Cooke references himself[20] Published in 1906, Goodrich prefaces his book by stating that many pieces can be learned in one-half to one-quarter of the time necessary if people use his strategy, which can be seen below:

1. Familiarity with the elemental material music – scales and chords, measure and rhythm
2. The principles of harmonic progression
3. Analysis of the musical design
4. The continuation or enlargement of this design according to the same general principles which governed the composer
5. Conventional outlines of form which tend to reveal the order and tonality of different divisions in certain styles of music[21]

The repertoire emphasis is mostly on piano music but the equal emphasis of melodic and harmonic memorization does not make this source a waste for people who read a single line of music. Goodrich writes this book and these strategies under the pretense that the student is familiar with all major and minor scales with their accompanying chords. The first lesson in memorizing melodies is to identify a motive. The motive is classified with scale degrees based on the key area previously established. From this point, the note names are irrelevant; it is more important to know the function of the notes used than the literal names. Goodrich emphasizes this concept by requiring constant and deliberate transposition of motives as part of the memorization

[20] T.W. Herringshaw. *Herringshaw's American Blue-Book of Biography: Prominent Americans Of… An Accurate Biographical Record of Prominent Citizens in All Walks of Life*: (American Publishers' Association, 1914), 431.
[21] A. J. Goodrich. *Guide to Memorizing Music*: (John Church Company, 1906), iv.

process. At first, the transposition is diatonic rather than chromatic in order to root ourselves into our key area. As an exercise, write the motive down once, then proceed with just the first note of the transposed iteration and note stems to show that there should be transposed notes played in those spots. An ascending or descending motion is recommended at first, since there are no inferred harmonies to worry about.

When working with students, the student may not write down the transpositions and read from staff paper. Describing the motives in terms of scale degrees and intervals prevents "a mere parrot-like process of repeating from memory: the latter is a theory which at once calls into action the mental forces[22]." This is a principle of learning that has been instilled in my own playing by my professor, Kathleen McLean. She often talks about learning simple melodies or exercises by ear at a young age and being required to transpose them into any key or modality. This mentality not only frees the student from merely reading what in front of them, but it also allows a type of practice that makes finger motions more natural.

Goodrich emphasizes the importance of practicing in a very thoughtful and slow manner. Cooke talks about a similar concept of practicing music in exact repetitions but does not explain how to deal with mistakes. Cooke refers to mistakes as a lack of familiarity with the piece. He says that mistakes are due to carelessness and inconsistency in details[23]. Goodrich makes sure to say that when mistakes occur one should not attempt to correct the mistake but continue in the sequence at the same slow tempo. Before starting again, the student must analyze what went wrong and then proceed with the exercise[24]. When comparing Cooke and Goodrich, it simply comes down to the difference between memorizing what is on the page and memorizing the road map created by analysis.

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[22] Goodrich. 15.
[23] Cooke, 59-63.
[24] Goodrich, 12.

The book continues by showing how motives can often be influenced by harmonic structure. The next thing for the analyst to recognize is the difference between chord and non-chord tones used in motives. This will help give further function and help the musician identify the notes that need more or less emphasis. In the previous chapters on harmony, cadential chords are broken down into tonic, subdominant, and dominant functions. As a student analyzes a melody, they can start thinking about the harmonic progressions inferred. When continuing the motive transposition strategy established in the first chapter, it helps give different moments in music. urther implan itself in the performer's brain, the harmony acts as an aid.

Fundamentally, presents a very clear of approaching analysis for memorization. By memorizing function rather than note names, it encourages a deeper understanding of the piece. The transposition of motives and melodies shows the musician that they are able to internaliz what the piece represents. One of the large issues with this text is its lack of solutions for post-tonal music. The most recent composer used as an example is Carl Reinecke, which does not come close to showing the issues of where music is progressing. The biggest emphasis Goodrich makes is on deliberate practicing of patterns, which lends itself well to tonal music. Identification of sequences, ornamentation, and tonal shifts demystify notes and create a formal structure.

In order to fully utilize this strategy, the student truly needs a good foundation in both music theory and fundamentals in their instrument. Pattern transposition would be both tedious and incredibly time consuming without being able to play comfortably in all keys. In the beginning of the book, Goodrich says that his analysis will cut down on learning and memorizing time. This is only true when a student has the fundamentals mentioned above. The skills necessary are acquired both with and away from their instrument. Without them, this method will fall completely flat. As an educator, I do not think it is out of line to expect students to know all of their major and minor scales along with knowledge of intervals within a diatonic scale. It often

leads to more efficient practicing, pattern recognition, and memorizing, letting the student fully comprehend the notes being played.

There is a common misconception about ability in regards to music and memory. Neuroscientist Daniel Levitin proposes in his early research that both musicians and non-musicians have the same likelihood in remembering pitches and songs, regardless of training. In his 1996 dissertation entitled *Mechanisms of Memory for Musical Attributes*, Levitin conducts eight different experiments to show the span of memory of pitches and tempo in a diverse group of subjects. In earlier research it is said that 1 in 10,000 people possess absolute pitch[25] Absolute pitch is defined as the ability to produce or identify specific pitches without reference to an external standard[26] Levitin doe ask why absolute pitch is so rare, but rather why more people possess it.

The short answer that he delves into is that people possess absolute pitch as an extension of their own memory. This skill contains two facets: the ability to replicate pitch and the ability to properly label the pitch[27] If we considered just the first component, many more people would possess absolute pitch, but the definition used by most musicians require a familiarity in musical labeling. The first component will be known as pitch memory and can be developed by repeated exposure to songs[28] When asked to recall a popular rock and roll tune, 57% percent of people tested could recall the song within one semitone[29] That percentage includes untrained musicians. 64% of participants could replicate a tempo within 4% of the original tempo of the song[30] that more than half of people can replicate a musical memory simply from listening to a work and not consciously trying to memorize.

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[25] Daniel J. Levitin. "Mechanisms of Memory for Musical Attributes." (University of Oregon, 1996), 12.
[26] J. Baggaley, "Measurement of Absolute Pitch." *Psychology of Music* 22, (1974): 11-17.
[27] Levitin, 13.
[28] Levitin, 62.
[29] Levitin, 21-22.
[30] Levitin, 45-46.

The type of long-term memory that is being utilized by these participants is called implicit memory, which is defined as a subconscious cognitive process[31] These memories can be brought back through performance rather than recollection. Implicit memory is generally associated with motor skills that require no thought, such as tying shoes. Also with the use of priming, can create subconscious awareness. In Levitin's experiments, participants are shown a large collection of CDs, in which they can pick one with a song they know and love. By seeing the CD, they were primed to implicitly recognize the information necessary to accurately recall the song. The counterpart to implicit memory is explicit memory, which is a conscious effort to recall or memorize information, particularly events and concepts[32]

Both types of memory can and should be utilized for musical recall because they utilize anatomically different parts of the brain, allowing for maximal recall. Explicit memories are stored in the hippocampus and surrounding neural pathways to the cortex. The hippocampus allows for an "instant replay" sort of recall, by replaying events in your mind. This is the same part of the brain in which spatial memories are stored. Implicit memories are stored in places used for motor skills: the cerebellum, basal ganglia, and motor cortex[33]

Levitin's research shows that aural musical memory is much more embedded in people than is commonly believed. More than 50% of people can recall pitch and tempo regardless of training. With this knowledge, it is valuable to educators and students to identify listening to pieces for memory as an important and fairly effortless tool. The subconscious in many people will absorb information, giving the musician greater ease in recall. By utilizing as many memory sources in the brain as possible, musical memories can be developed without stress on the performer.

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[31] Bob Snyder. *Music and Memory: An Introduction*. Cambridge, MA: MIT Press, 2000, 72-74.
[32] Snyder, 74-75.
[33] Bruno Dubuc, "The Brain from Top to Bottom" thebrain.mcgill.ca (accessed 07/30/2014).

Chapter 4: Survey results

In this chapter, the results of the survey will be discussed. This will include select questions broken into percentages and analysis of the open ended questions. A complete copy of the survey and the answers to questions 6, 7, 11, and 17 will be included in Appendix A. I received 142 responses between September 3rd, 2014 and November 7th, 2014, all of which are anonymous participants who are aware that participation is voluntary and will be used for this dissertation.

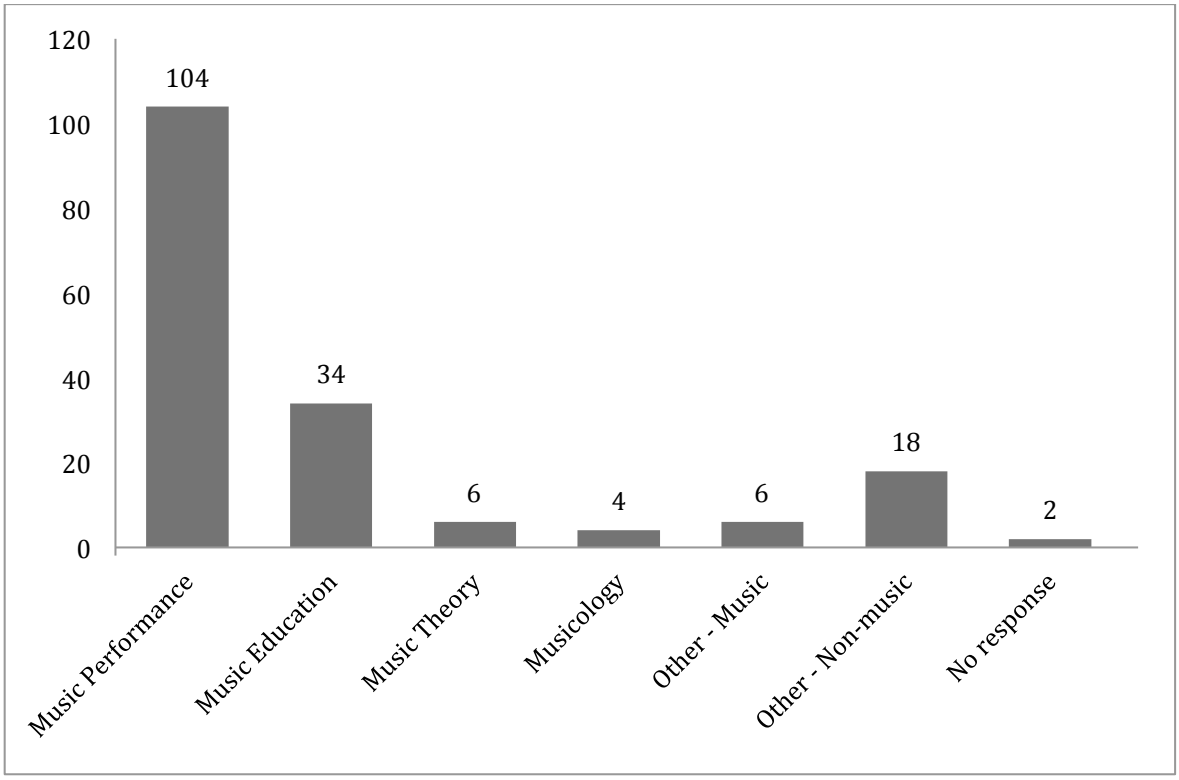
The purpose of this survey was to get an idea of how wind players approach memorization and what prior experiences and feelings they have towards the process. Before conducting the survey, I predicted that wind players have not been encouraged or required to memorize. If they have been asked to memorize, they were not given guidance in order to memorize successfully. Additionally, I wanted to correlate if students think memorization is not a valuable skill and see if they consider themselves strong at memorizing. Often people are discouraged from experiences because they are not given any instruction, leading to feelings of being set up for failure. I am hoping that the results of this survey will further prove the importance of this project and show the necessity for an introduction into memorization.

The limitations of this study are the scope of participants. As shown in Question 2, almost one out of four participants are bassoonists while another quarter of participants make up all brass players who participated. These results are due to how the study was distributed, which through email and social media. As a bassoonist, it would make sense that I would get higher participation from bassoonists because I personally know more bassoonists than people who play other instruments. Bassoonists would also be more likely to continue sharing my survey, compounding the amount of bassoon participation.

Question 1: What major do/did you have in college?

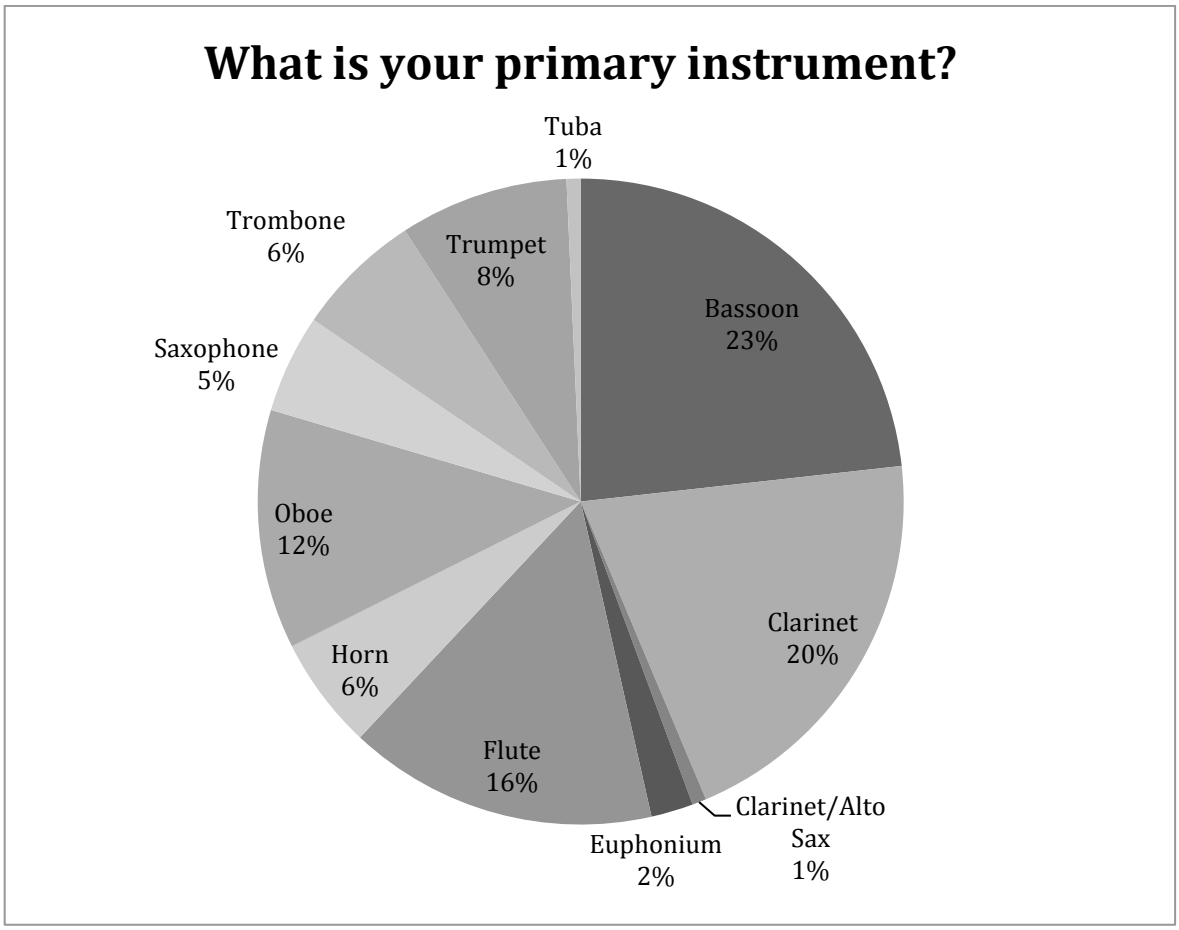
Note: had more than one major, they were counted once in each major stated. As an example, a student who majors in both Music Performance and Music Education will be counted once in both majors. If a student majors in two different non-music majors, they will be counted twice in the non-music category. Students who listed their major as "Music" with no further clarification will be placed in the "Other – Music" category.

Table 4.1



Question 2: What is your primary instrument?

Table 4.2



Question 3: How long have you taken private lessons on this instrument?

The range of years of study is between 3 and 30 years. The average years of study of the participants is 11 years.

Question 4: How long have you taken private lesson at the collegiate level?

The range of years of collegiate study is between 0 and 16. The average years of collegiate study of the participants is 5.4 years.

Question 5: Have you been required to memorize music by your teacher?

62% of participants responded “Yes” and 38% of participants responded “No”. Out of the 88 participants who repsonded “Yes”, 35 participants (40%) of students were given no instruction on how to apporach memorization. These answers varied from the teacher simply giving no instruction to the teacher wanting the student to discover their own ways to go about the music.

Question 6: If you answered “Yes”, how did your teacher teach memorization tactics to you? And Question 7: Regardless of requirement, what memorization tactics have worked best for you?

Figure 4.1

The above word cloud shows which words were used most commonly in Question 6. It is assumed that words like memorization, memorize, music, and teacher would be the most commonly used words because most people used complete sentences in their answers, meaning

they repeated parts of the question. The results between question 6 and Question 7 were very similar, which is why they are being combined at this point.

The largest words to take note of are repetition, sections, phrases, and recordings. This indicates that most students take small sections and repeat them in order to memorize. Most of the participants have been using a purely physical/kinesthetic way to memorize, even though muscle memory is said to be the least reliable way to memorize a piece. Sheer repetition has also been said to be ineffective just in terms of progress in the practice room[34]. Dr. Christine Carter discusses on the blog, *The Bulletproof Musician*, that habituation prevents people from paying attention to their actions. The article addresses issues in the practice room but can really be applied to the memorization process too.

The participants have done some things correctly; breaking music into smaller parts can make the process less daunting. The question lies in how the pieces are put back together and whether or not they are connected mentally in any capacity. There are a lot of questions to be asked – What is a section? How do you determine what a section is? What do you do when you finish memorizing a section? Jennifer Mishra writes in her 2011 study that students who memorize segments of music will memorize less efficiently than those who try to get a greater structural idea and memorize the piece as a whole[35] . Jennifer's study is discussed more at length in Chapter 1.

This shows where some of the gaps lie in tactics. In the word cloud, these words are present but are very small: singing, understanding, think, progression, visualization, pattern, chordal, and notated. These words lend themselves to analysis and mental practice. There does not seem to be enough emphasis on memorizing away from the instrument and reflection. In W.

[34] Noa Kageyama. "Why the Progress You Make in the Practice Room Seems to Disappear Overnight." In The Bulletproof Musician, 2015: The Bulletproof Musician.
[35] Mishra, 62.

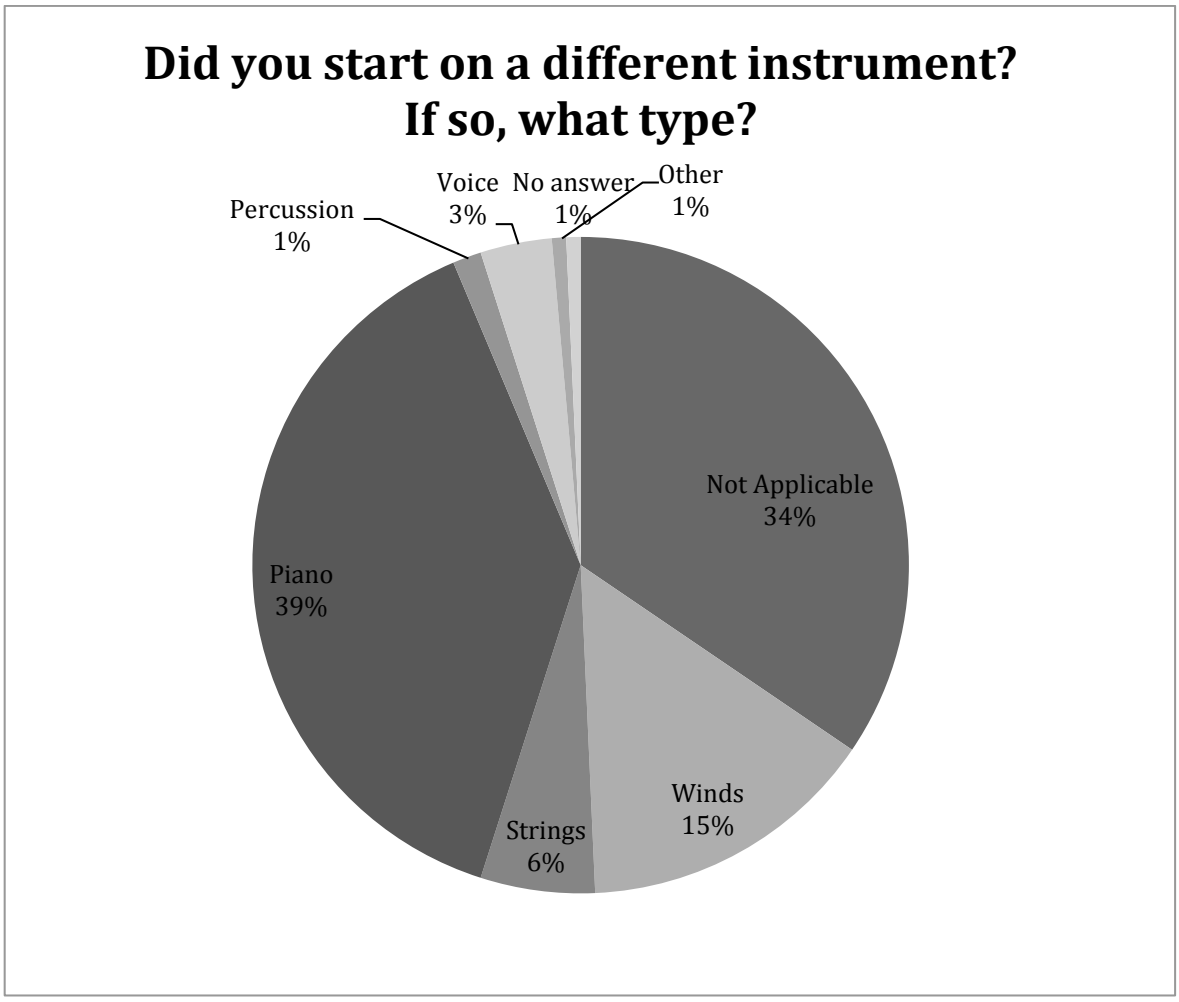
Timothy Gallwey's book, *The Inner Game of Tennis*, the performance done in one's own head is just as valuable as the performance everyone else can hear[36]. The synthesis of the music can be done well mentally and supplement the practice and physicality that goes into playing an instrument.

A larger image of the word cloud can be seen in Appendix A.

[36] W.T. Gallwey, P. Carroll, and Z. Kleinman. The Inner Game of Tennis: The Classic Guide to the Mental Side of Peak Performance: Random House Publishing Group, 2010.

Question 8: Did you start on a different instrument? If so, what type?

Table 4.3



Question 9: How long did you take lessons on your first instrument?

The range of years for the first instrument is between 1 and 18 years, averaging 6.8 years total. This excludes students who never took lessons on their primary instruments.

Question 10: Did your teacher require you to memorize music?

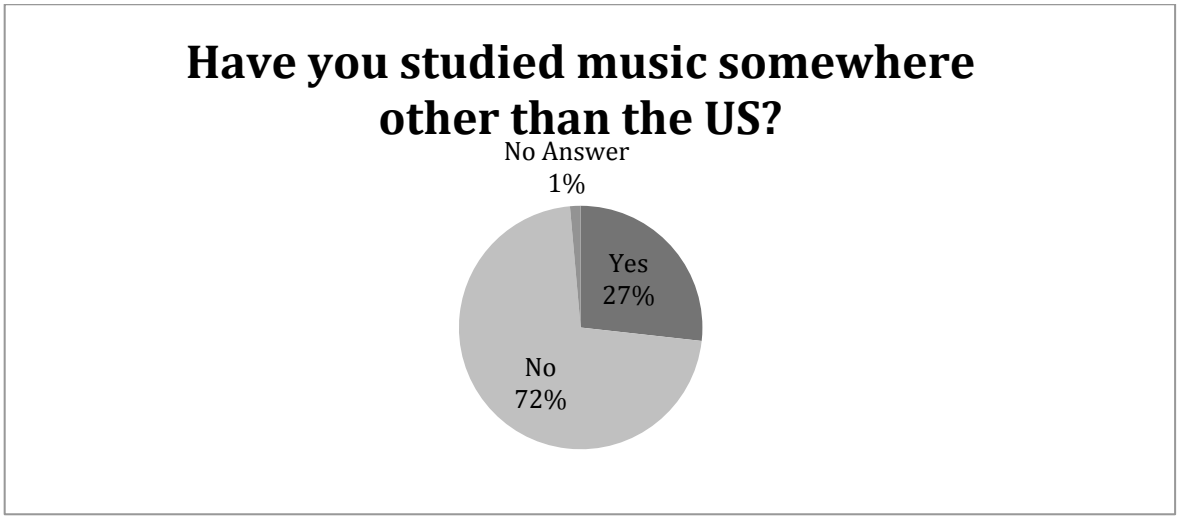
Out of the 90 people who started on a different instrument, 54 people were required to memorize and 36 people were not required. 41 of the 54 participants who were required to memorize where people who started on non-wind instruments.

Question 11: If you answered "Yes", how did your teacher teach memorization tactics to you?

Similarly to Questions 6 and 7, there is a lot of emphasis on repetition and rote learning. Elaborated answers will be available in Appendix A.

Question 12: Have you studied music somewhere other than the US?

Table 4.4



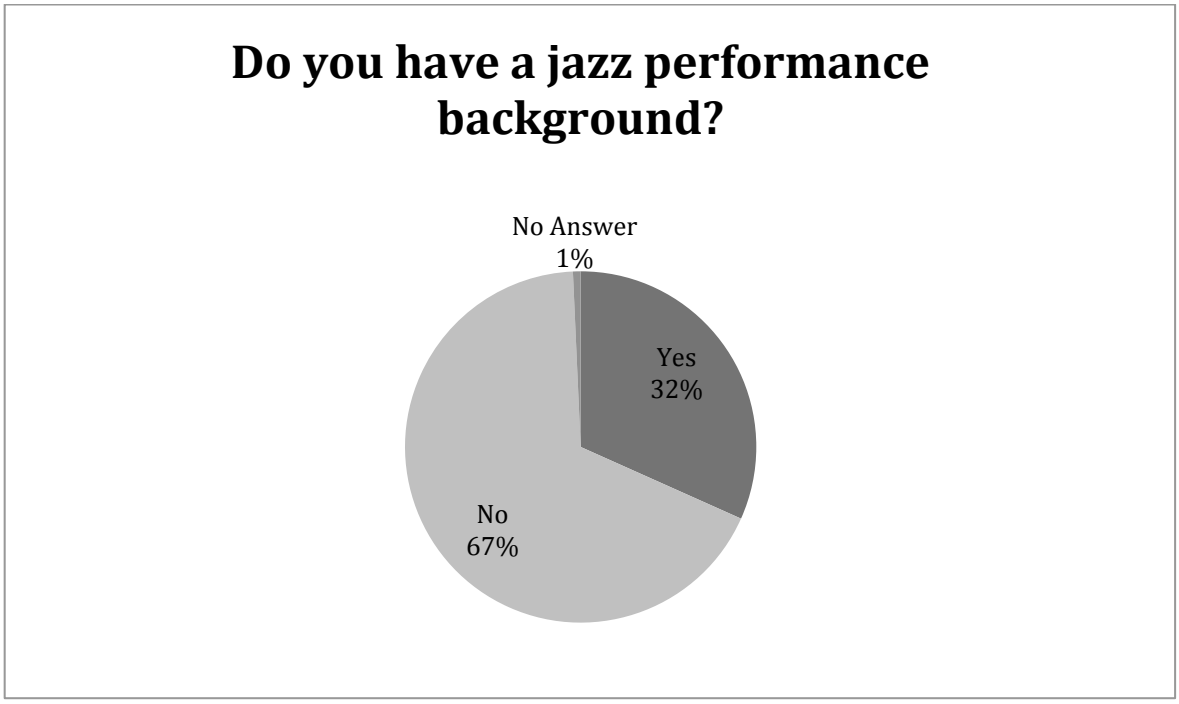
Question 13: If so, please further elaborate.

The participants who studied music abroad have lived in the following countries: Taiwan, England, Austria, Scotland, Australia, China, Ireland, Korea, Italy, Canada, France, Switzerland,

Germany, Holland, Portugal, India, Greece, Ecuador, and Israel. 100% of those students have been required to memorize during their collegiate studies.

Question 14: Do you have a jazz performance background?

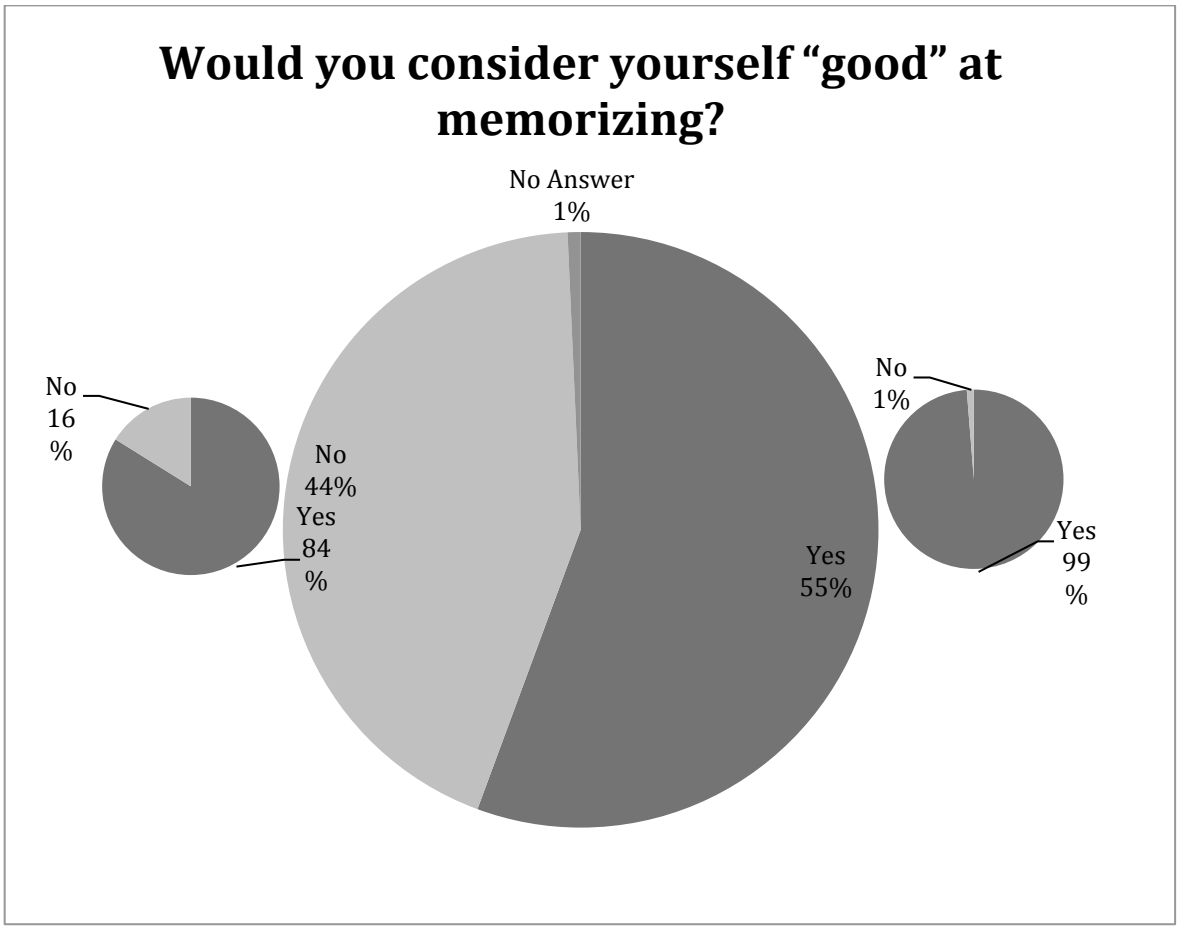
Table 4.5



This question was asked because jazz is known for not using sheet music. After the player learns the tune, they have all of the tools necessary to improvise. From a researcher's point of view, I failed in this line of question because I did not ask enough questions to correlate jazz training to memorization skills. Out of the 45 participants who said they have a jazz background, 31 said they consider themselves to be good at memorizing.

Question 15: Would you consider yourself "good" at memorizing? and Question 16: Do you think memorization is a valuable skill?

Table 4.6



The graphs above answer both questions 15 and 16. The large graph in the middle shows what percentage of participants considers themselves good at memorizing. The smaller graphs to each side represent the breakdown of answers in regards to whether the participants believe memorization is a valuable skill or not. This is represented in this way to show if there is any correlation between participants considering themselves "bad" at memorizing and the participants thinking that memorization is not a valuable skill.

Question 17: Please explain your previous answer.

This question yielded a variety of answers, but there were two responses in particular that reoccurred. Participants agreed that memorization is good for allowing performers to focus more on style and interpretation rather than notes on the page. A lot of other participants posed the question, how well do you know a piece if it's *not* memorized? This observation truly shows the point of this research; memorization is a valuable tool to ensure true integration of new material. My favorite quote from this open-ended question is, "Medieval people memorized entire books of prose and music, while today's culture doesn't even memorize phone numbers anymore because of the ease of getting information through technology. Our brains are dying without it." This is an extreme view, but brings up an interesting issue of our distracted culture refusing to retain information.

On the other hand, one participant who is opposed to memorization stated the complete opposite – "Do we expect people to memorize books? No...because we value the ability to read and comprehend." There is a very simple issue with this logic. Music is not meant to be paraphrased. The performance of music and the recitation of an entire book are done for different outcomes. It is absolutely correct that a reading a book rather than memorizing a book proves the ability to read and comprehend the material, but the book is not intended to be repeated back verbatim. Musical performance is an experience in which each note is supposed to be played with 100% accuracy. A book is meant to be summarized. *Harry Potter and the Sorcerer's Stone* is about a young man who finds out his parents were wizards, so he goes to wizard school, makes some friends, and fights evil. Mozart's Bassoon Concerto, K. 191 is a three movement concerto that starts in B-flat major, travels through some other key areas, and eventually ends up back in B-flat major. The summary of the bassoon concerto does not tell nearly as much information about an understanding of the material as a summary of *Harry Potter*.

Conclusion

If I were to conduct this survey again, I would change some of the language of the questions for easier compiling down the road. As an example, questions asking about how many years a person study should have required a numeric answer in order to eliminate having to convert text into numbers manually. Another I ran into was with "See Above". There were questions that potentially had similar content, so instead of retyping the answer for data purposes, people wrote "See Above", which required me to look through the results table and look at their previous answer.

One of the things I should have anticipated is the politeness of the participant. There were times in which I simply needed a yes or no, but some people would choose the "Other" option and explain, which made my data harder to sift through. An example of this would be Question 8, when I asked if the participant started on a different instrument. The options were split into vague instrument families (winds, strings, piano, voice, etc.). I included "Other" as a safeguard into the survey – I did not want to ruin my results because I forgot about something. I am thankful I included the "Other" category because some people talked about non-Western instruments they played. Unfortunately, I also would get responses that said "No, just the flute". If we were having a polite conversation, I would appreciate the clarification; however this does not lend itself well towards data.

Lastly, as I mentioned above, I wish I had delved further into my line of questioning about jazz. Luckily, some people talked about their jazz background in Question 17, but I think it would have been really valuable to have more data about memorization tactics in the jazz world.

The results of this survey show the value in encouraging students to memorize music. One of the things I was shocked by while reading the results was the emphasis on competition. Of the 131 responses I got for Question 17 (Explain why memorization is a valuable skill), 36

participants mention the word performance, particularly how this is a valuable skill for performance. This shows that approximately 25% of participants do not see how memorization is an important pedagogical tool and really only see memorization as a party trick necessary for performance.

In further studies, I would consider conducting research with musicians who have participated in marching band. This is a musical outlet in which performers are expected to memorize lots of short pieces quickly. Marching bands also constitute "trained" and untrained musicians, which could result in a very interesting data set.

Chapter 5: List of songs and analyses

The following chapter contains analyses of all the excerpts that are included in the etude book. The etude book consists of twenty excerpts from twenty different art songs. The musical periods span from baroque through twentieth century art song. Each exercise will be accompanied with two exercises that the student can do along with learning the excerpt. The intent is that the student will discover which memorization tactics are most helpful so they can apply those strategies in other pieces.

The original languages used in the art songs consist of German, French, English, Italian, Spanish, Norwegian, and Swedish. The text that have been given to the exercises were created by the author and are not intended to be direct translations by any means. The English text is supposed to be inspired by the context of the music. If a student is having trouble retaining the meaning of the music through the loose translations or truthfully thinks the text is stupid, please encourage students to change the text so they will remember the text. The intention is not to have the student memorize the text for the sake of memorizing, but rather to have an extra helping hand when remember the structure of the music.

Repertoire choices were based on a myriad of different components. Pieces were primarily selected because of their potential for teaching, but some pieces were chosen because I like them. I wanted a balance between languages and also representation of female composers. All of the pieces are part of public domain to avoid legal complications.

The pieces are in an order that is intended to go from easiest to most difficult. At the end of each explanation, there is also a short set of skills the student must have in order to be able to memorize each excerpt. Most of the skills necessary have to do with scales the student should know by memory and formal structure. There is a lot of built in flexibility with this book, so if the

student does not know all of their scales but you would like them to start building memorization skills, feel free to transpose the music into "friendlier" keys.

Future projects I would consider doing with this etude book would be building a website containing audio files of the accompaniments, giving the student a "music minus one" opportunity. The website would also include extra resource sheets, such as additional copies of exercises so students do not have to continually photocopy the book in order to redo exercises. There could potentially be multiple volumes of this etude book with different songs requiring different skill sets. There is only one truly post tonal piece included, which requires an entirely different mindset in terms of analysis.

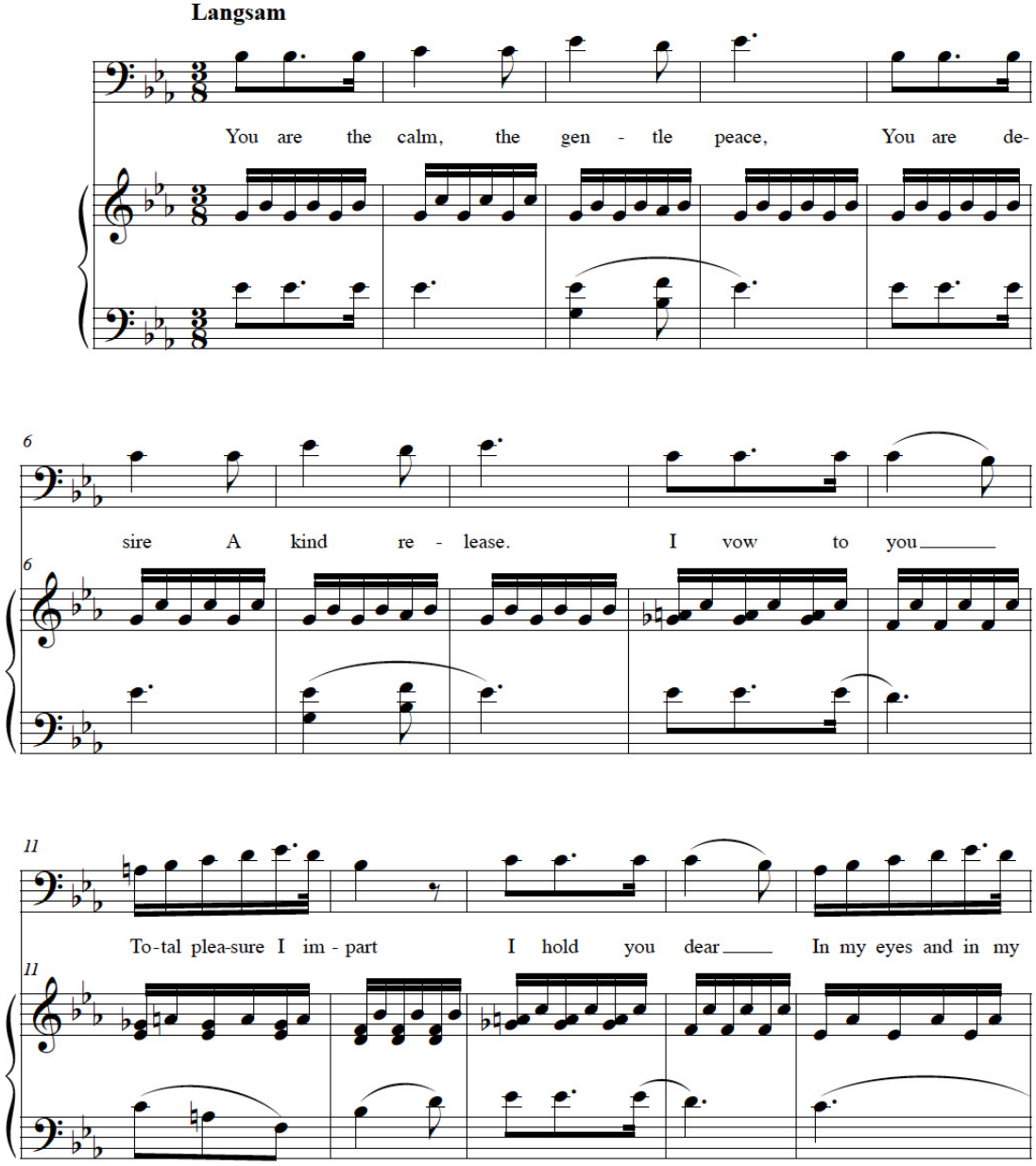
Table 5.1

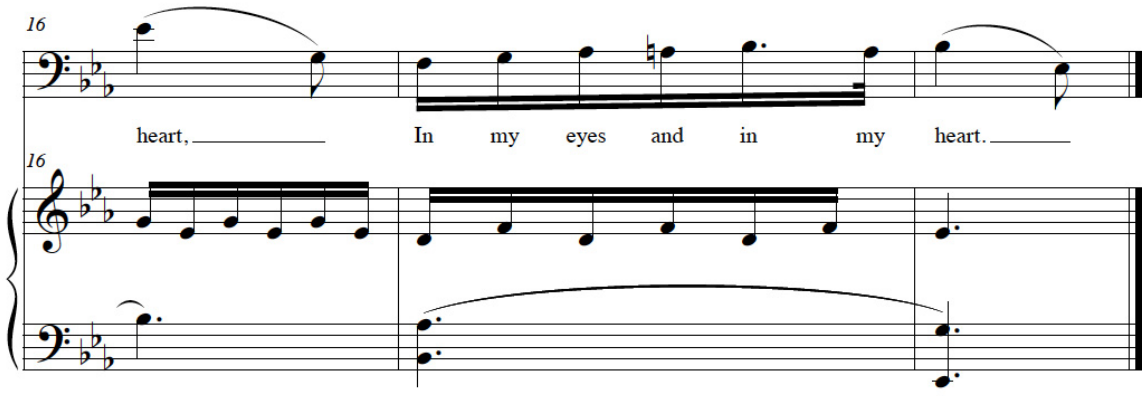
Etude No.	Title	Author	Language	Page No.
1	Du bist die Ruh	Franz Schubert	German	32
2	Die Stille Lotosblume	Clara Schumann	German	36
3	Das Paradies	Josephine Lang	German	40
4	El Mirar de la Maja	Enrique Grenada	Spanish	44
5	Irish Love Song	Margaret Lang	English	49
6	Amarilli mia bella	Giulio Caccini	Italian	52
7	À Chloris	Reynaldo Hahn	French	55
8	Das Wandern	Franz Schubert	German	60
9	Lydia	Gabriel Faure	French	65
10	Vittoria mio core	Giacomo Carissimi	Italian	70
11	Guten	Edvard Grieg	Norwegian	75
12	Demanten På Marssnön	Jean Sibelius	Swedish	79
13	O Mistress Mine	Robert Quilter	English	84
14	Après un Rêve	Gabriel Faure	French	89
15	Mine be the lips	Amy Beach	English	93
16	Anzoleta dopo la regata	Gioacchino Rossini	Spanish	97
17	Nothing	Clara Kathleen Rogers	English	102
18	Nana	Manuel de Falla	Spanish	108
19	Der Wanderer	Arnold Schoenberg	German	113
20	Nanny	Ernest Chausson	French	118

Du bist die Ruh

Franz Schubert

Langsam




16
heart,
In my eyes and in my heart.
16

Du bist die Ruh,	You are the calm,
Der Friede mild,	The gentle peace,
Die Sehnsucht du	You are desire
Und was sie stillt.	A kind release.
Ich weihe dir	I vow to you
Voll Lust und Schmerz	Total pleasure I impart
Zur Wohnung hier	I hold you dear
Mein Aug und Herz.	In my eyes and in my heart

I have selected *Du bist die Ruh* by Franz Schubert as the first excerpt to use in the etude book. The use of contour patterns and stepwise motion make this work a strong choice to start with. The overall form of the entire song is AABB and I utilized only the A section. The design of the book would allow students to come back to pieces they have worked on in the past and learn the remaining parts that are not shown in the etude book. This concept will show memory retention over time and encourage future performances of entire works.

The A section can be divided into four sections – another aabb form within the overall structure. The a section spans from measures one to four and can be summarized as an ascending line from scale degrees 5 to 1. The b sections move primarily by step but plays with the idea of tonal centers. The use of A-natural versus A-flat in measures eleven and fifteen show the use of the same contour but resolve into different tonal cadences: B-flat and E-flat respectively. The second b section has an extra two measures (measures seventeen and eighteen) to affirm E-flat major; the second E-flat major cadence is a perfect authentic cadence rather than an imperfect authentic cadence, which can be seen in measure sixteen.

A student will find memorization to be a successful process if they spend a little bit of time analyzing the structure of the excerpt beforehand. Pattern recognition within the structure will prove to the student that there is a lot of repetition and fewer things to remember. Using a

strategy called "chunking" gives meaning to new material[37]. Instead of seeing every individual note as a single unit, combining them into previously identified groups will create larger singular units. As an example, measure eleven can be seen as an ascending scale in the key of B-flat, rather than a series of five unrelated notes.

This etude can also act as an introduction to interpretation. Two aspects of composition in this excerpt show two well-known principles established by Pablo Casals. In David Blum's book, *Casals and the Art of Interpretation*, contour and note repetition help the performer show direction of line. The opening repeated B-flats should grow in intensity according to Casals' teachings. He said, "Something has to be done. Otherwise you have monotony – and nothing is more monotonous than monotony!"[38] Additionally, the repetition of the phrases can be played at different dynamics to create more interest in the repetition. Lastly, Casals's encourages following the contour of the line to create the dynamic interest; as a line ascends, the dynamic will increase and vice versa.[39] These interpretation suggestions stem from a musician who approaches all of music in a connected and vocal fashion. The text used in these etudes should aid the student and remind them of the innate vocal nature that is necessary not only for songs with text, but especially memorized music.

Skills necessary:

- E-flat and B-flat major scales
- Cadence type identification
- E-flat major arpeggios

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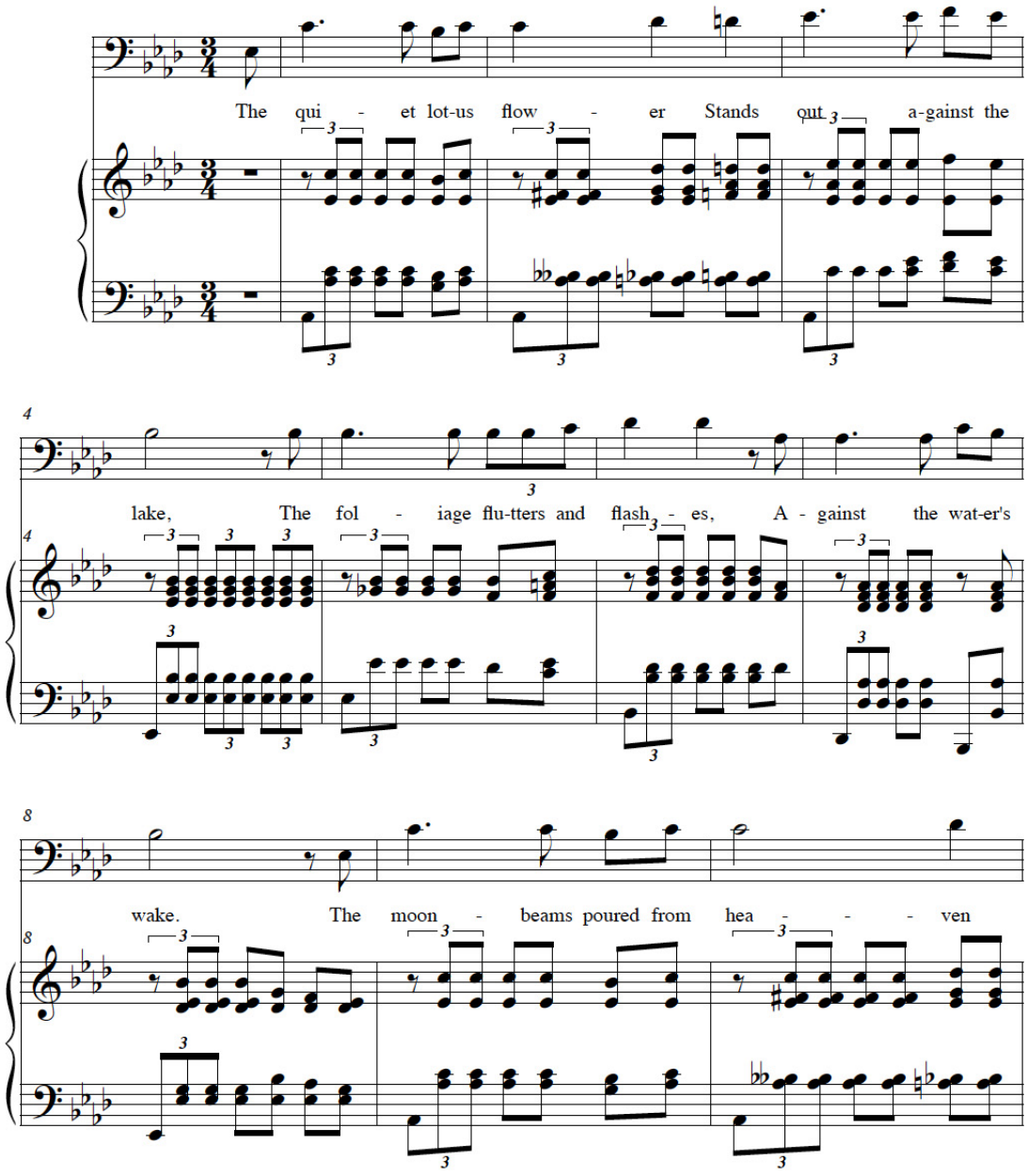
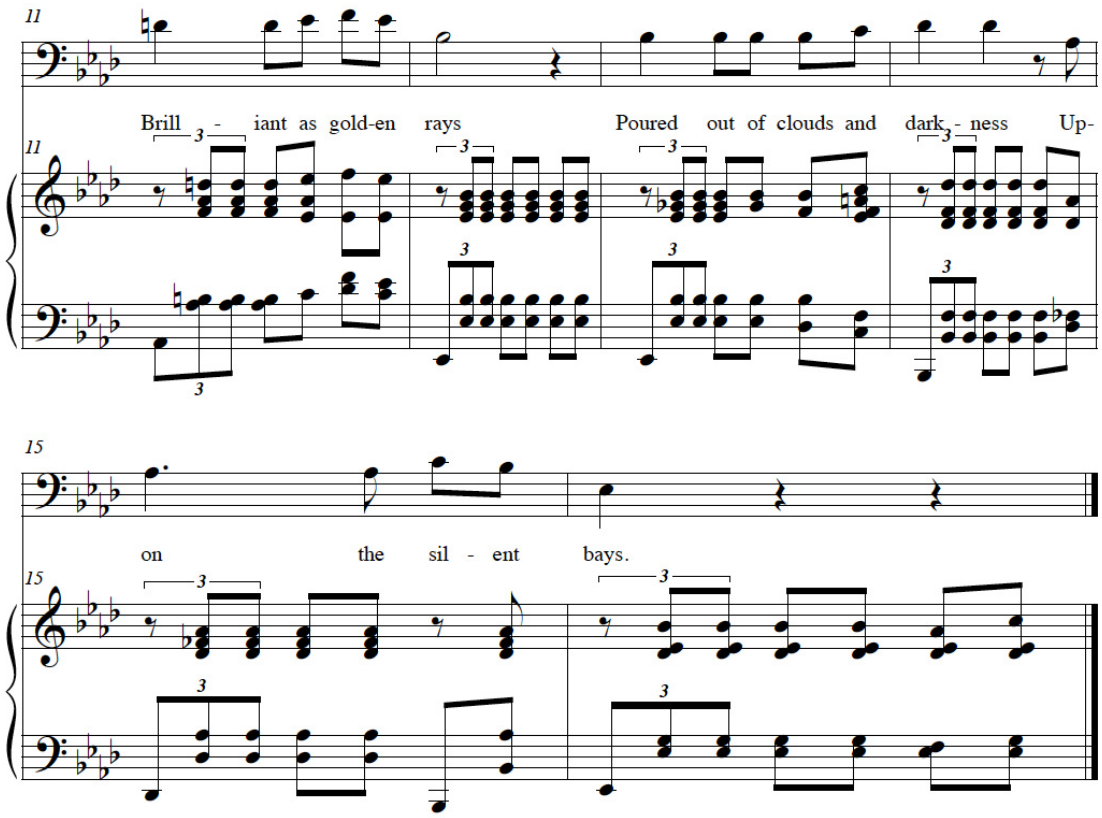
[37] A. Esgate, D. Groome, and K. Baker. *An Introduction to Applied Cognitive Psychology*: Psychology Press, 2005, 20.
[38] David Blum. *Casals and the Art of Interpretation*: University of California Press, 1980, 29.
[39] Blum, 19.

Die Stille Lotosblume

Clara Schumann




11
Brill - iant as gold-en rays Poured out of clouds and dark - ness Up-
11
15
on the sil - ent bays.
15

Die stille Wasserrose	The quiet lotus flower
Steigt aus dem blauen See,	Stands out against the lake,
Die feuchten Blätter zittern,	The foliage flutters and flashes,
Der Kelch ist weiß wie Schnee.	Against the water's wake.
Da gießt der Mond vom Himmel	The moonbeams poured from heaven
All' seinen gold'nen Schein,	Brilliant as golden rays
Gießt alle seine Strahlen	Poured out of clouds and darkness
In ihren Schoß hinein.	Upon the silent bays.

When beginning memorization, repeated sections can give students a larger sense of confidence while working. The excerpt taken from "Die Stille Lotosblume" by Clara Schumann is two almost identical phrases played consecutively. The difference between the two phrases has mostly to do with text setting, which the student will be encouraged to note by getting a firm grasp of the text. As stated in the introduction of these explanations, the student is always encouraged to make up their own words if they are able to remember something else with more ease.

The first thing the student should do is identify where one phrase ends and another phrase begins. This is denoted by where the repetition begins, which can be seen between measures eight and nine. The next step would be to start identifying memory benchmarks within the first phrase. The use of rests within a phrase creates natural breathing points and can infer formal divisions, especially in this excerpt. The first phrase contains three smaller divisions at rests, which are in measures four, six, and eight.

After creating visual divisions, it is now time to analyze each chunk. The first thing to note will be the kinds of intervals used and the contour. The excerpt was chosen because of its mostly step-wise motion. The times in which there are leaps, they bridge the music between chunks. As an example, there is a leap between measures three and four, from E-flat to B-flat. The B-flat can be seen as an anticipatory note into the next phrase, which can be seen with a

sustained B-flat on the downbeat of measure five. Additionally, the pickup into measure one is related to both the dominant chord seen in the original score but is also used in the tonic chord in measure one. Scale degree five is commonly used as a pickup note, so in this excerpt should be noted as such.

The overall contour seen between the three chunks is a descending scale starting on scale degree three (C). This can be seen by looking at the first note of each chunk. This type of analysis is related to Schenkerian analysis because our outline is a linear progression from the root, third, or fifth of a scale down to the tonic, which is described as a *Zug*[40]. The descending contour makes it easier to remember because it has to fit the pre-established pattern.

The last thing the student needs to do is identify the differences between the first and second larger phrases. The accompaniment remains the same between the phrases, but because of the text there are slight changes to the vocal line. One exercise the student could do is cover the first phrase with a piece of paper and describe the difference between the first and second phrase while looking at the second phrase. This encourages the student to work on recall and also could lead to the student critically deciding why the differences occur.

Skills necessary:

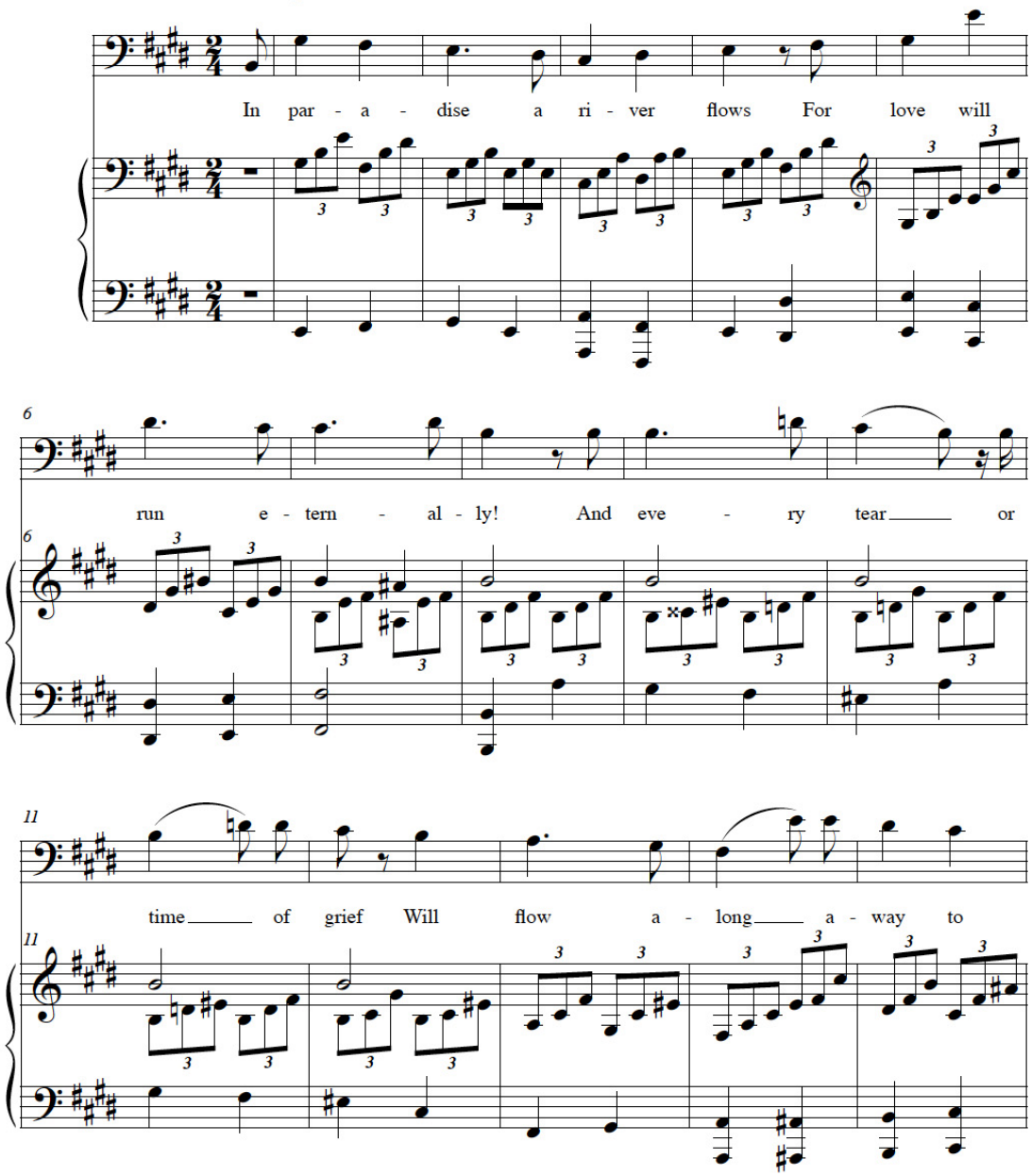
- A-flat major scale
- Formal structure

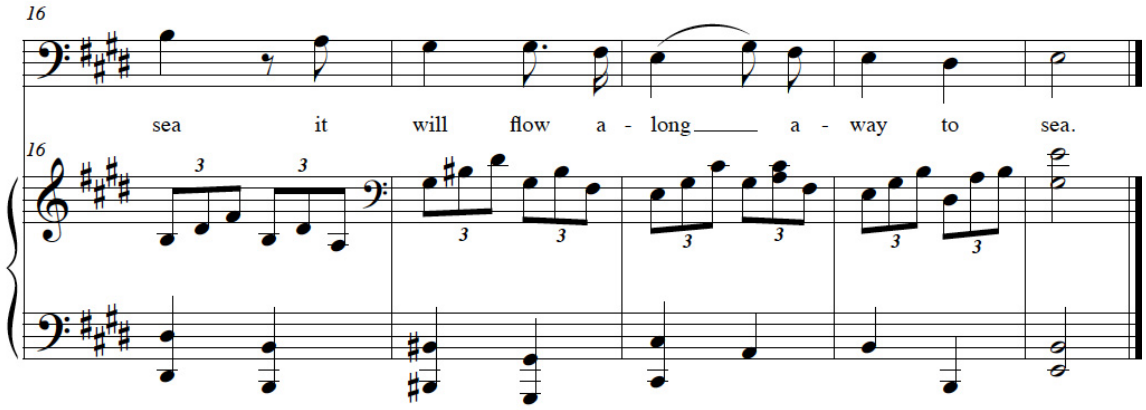
[40] Robert Snarrenberg, "Schenker, Heinrich", Oxford University Press http://www.oxfordmusiconline.com/subscriber/article/grove/music/24804 (accessed January 15 2015).

Das Paradies

Josephine Lang

Sehr langsam und Ausdrucksvoll




16
sea it will flow a - long a - way to sea.
16

Im Paradiese muss ein Fluss	In paradise a river flows
Der ew'gen Liebe rinnen!	For love will run eternally!
Und jede Sehnsuchtsträne muss	And every tear, or time of grief
Sein eine Perle drinnen.	(It) will flow along, away to sea.

This tranquil excerpt is a perfect opportunity for students to create formal divisions based on tonality in order to create benchmarks for memorization. *Das Paradies* by Josephine Lang is a strophic song that is part of a larger set of six songs. From a memorization-based standpoint, strophic songs have both easy and hard components to them. Obviously, the repetition of the melody makes memorizing a strophic song easier because there is less music to memorize; however, there is much more text to memorize, which eliminates a chance of strong text painting.

In addition to the analysis the student will typically do in conjunction with these excerpts, a strophic example could give the student an opportunity to create their own text that me be more meaningful to them. The text that was loosely translated for this excerpt however shows the change in musical mood. The student could do a very similar exercise if it would make the excerpt more memorable. The text can also help reflect the sections of the piece, as mentioned earlier.

This excerpt can be split into an ABA form based on tonal ideas. This particular ABA form is a asymmetrical rounded binary, which means that the first A section, measures one through eight, end on a half cadence. The B section starts in a functionally dominant tonality (but not what we usually expect), which last for four measures. The final A section returns to the tonic key for the final 8 bars of the excerpt.

The B section does not follow traditional rules that are learned about binary forms. Generally, the A section will either go to the dominant or relative major of whatever key was previously established, dependent on whether the A section is a major or minor key. In this piece,

the A section is in E major, which means presumably the B section will be in B major, the dominant. The B tonal center is established, but mostly in a B minor-sounding soundscape. A B pedal is seen in the right hand of the piano while the arpeggios outline B minor and B diminished. The melody only moves between scale degrees three, two, and one (D, C-sharp, and B), allowing for easy transition out of this section back into E major, seen in measure thirteen. The bass line in measure nine through twelve show hints of V/V in b minor because of the use of both A natural and F-sharps. The pedal note of B overrides the tonal ambiguity in addition to the oscillating melodic line.

In terms of memorization, this excerpt mostly moves by step. The larger leaps are used in expressive moments, which can be seen in both A sections. Each time there is a large ascending leap, the leap always goes to the note E and is not restricted by a specific interval. Often when memorizing, people are concerned with remembering exact details, such as each and every note name is it goes by. Instead of thinking about the E as an objective note we must rise to, it is much easier to think of all high points in this piece as E. It creates parameters of how high or low the piece could go, making things more relative rather than concrete. Earlier, the idea of creating benchmarks was discussed. These can be seen as arrival points, such as every time a B is played, or every time a high E is arrived at; the student needs to pick benchmarks that works for them. These benchmarks are another way of chunking the piece. It is important to create points of memory repose so any chunk does not seem too long.

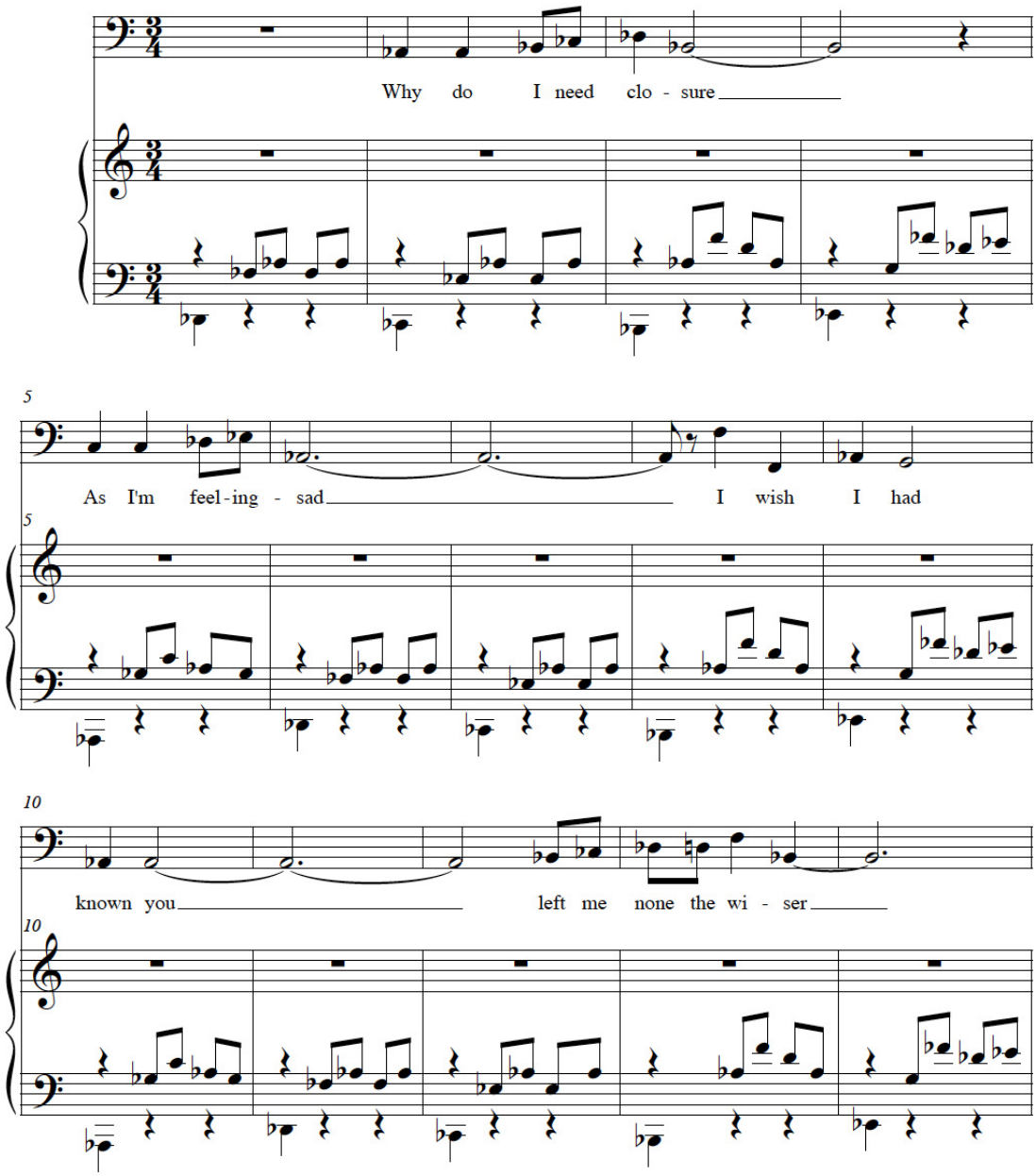
Skills necessary:

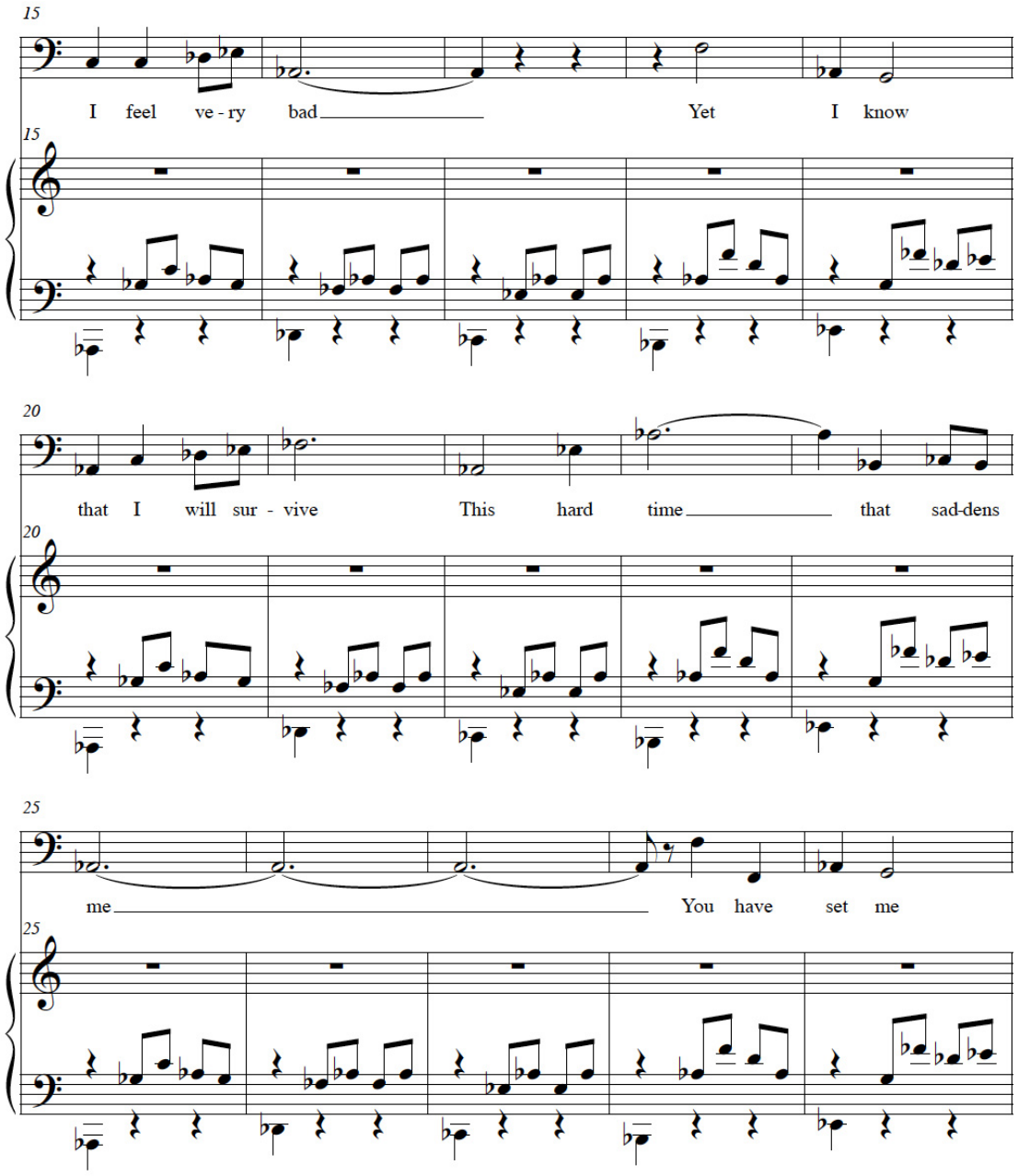
- E major and b minor scales
- Identification of half and authentic cadences
- Formal analysis- being able to label formal sections

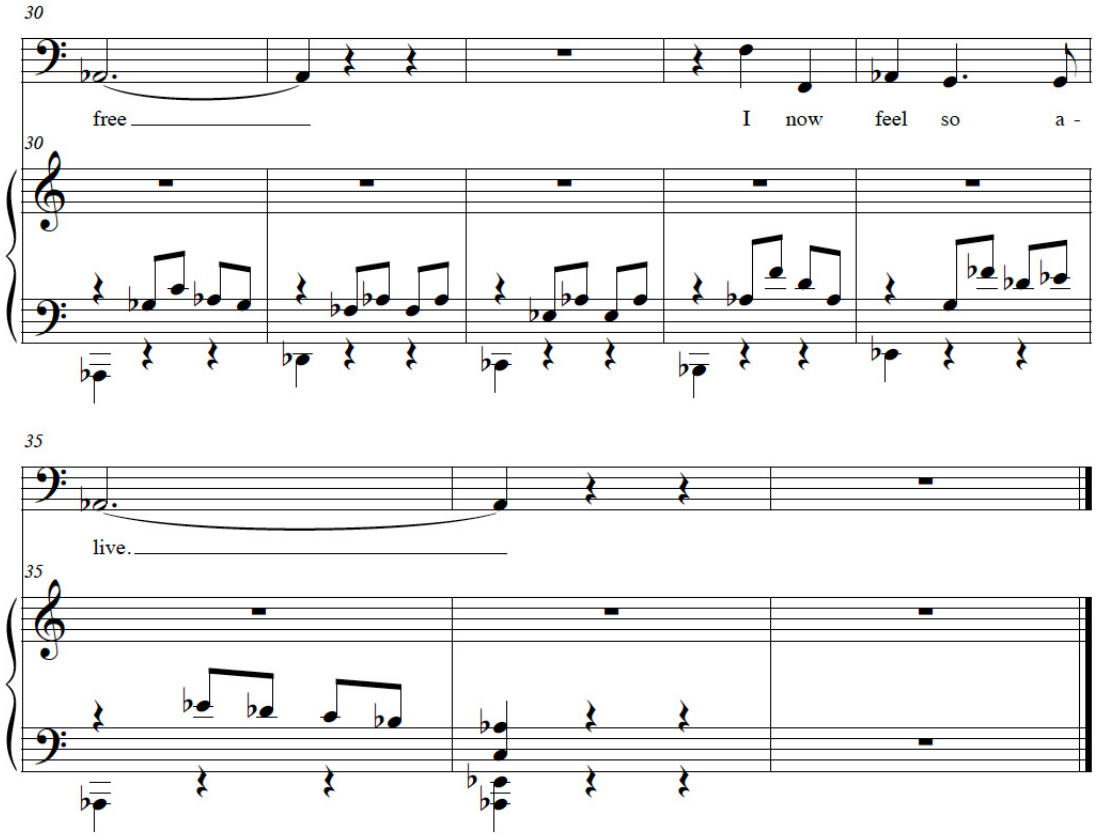
El mirar de la Maja

Enrique Granados

Allegretto comodo




15
I feel ve - ry bad Yet I know
15
20
that I will sur - vive This hard time that sad-dens
20
25
me You have set me
25


30
free
I now feel so a -
30
35
live.
35

¿Por qué es en mis ojos
tan hondo el mirar
que a fin de cortar
desdenes y enojos
los suelo entornar?
¿Qué fuego dentro llevarán
que si acaso con calor
los clavo en mi amor
sonrojo me dan?

Why do I need closure
As I'm feeling sad
I wish I had known
you left me none the wiser
I feel very bad
Yet I know that I will survive
This hard time that saddens me
You have set me free
I now feel so alive.

There are often times in which the accompaniment of a piece does not help the performer. A harmonic analysis often helps show progress through a piece. Ostinato accompaniments and aleatory make forward motion determined by tonality irrelevant. *El Mirar del Maja* by Enrique Granada uses a five-bar ostinato using pitches D-flat, C-flat, B-flat, E-flat, and A-flat on the strong beats. By looking strictly at the bass notes, there is a linear line seen between the D-flat and A-flat. The E-flat acts as a dominant note towards our tonic, A-flat.

The eighth notes seen in the ostinato create the following harmonies: D-flat minor, A-flat minor in first inversion, B-flat dominant seventh, E-flat dominant seventh with added flat two, and A-flat major dominant seventh. The voice part shows A-flat as the tonic, as does the fundamental notes in the ostinato bass. The use of the eighth notes confuse any sense of arrival in A-flat by using the seventh in the fifth bar of the pattern. This will continue the circular character of the ostinato.

The melodic line alternates between A-flat major and A-flat minor. These tonal changes line up with the ostinato bass, meaning the minor occurs on the C-flat measure and the major occurs on the A-flat measure. The melody consists of three components: minor, major, and a dominant function. With this pattern in mind, the piece creates an AAB form; the B section is an elaborated version of the A section, allowing the whole piece to act as a musical sentence.

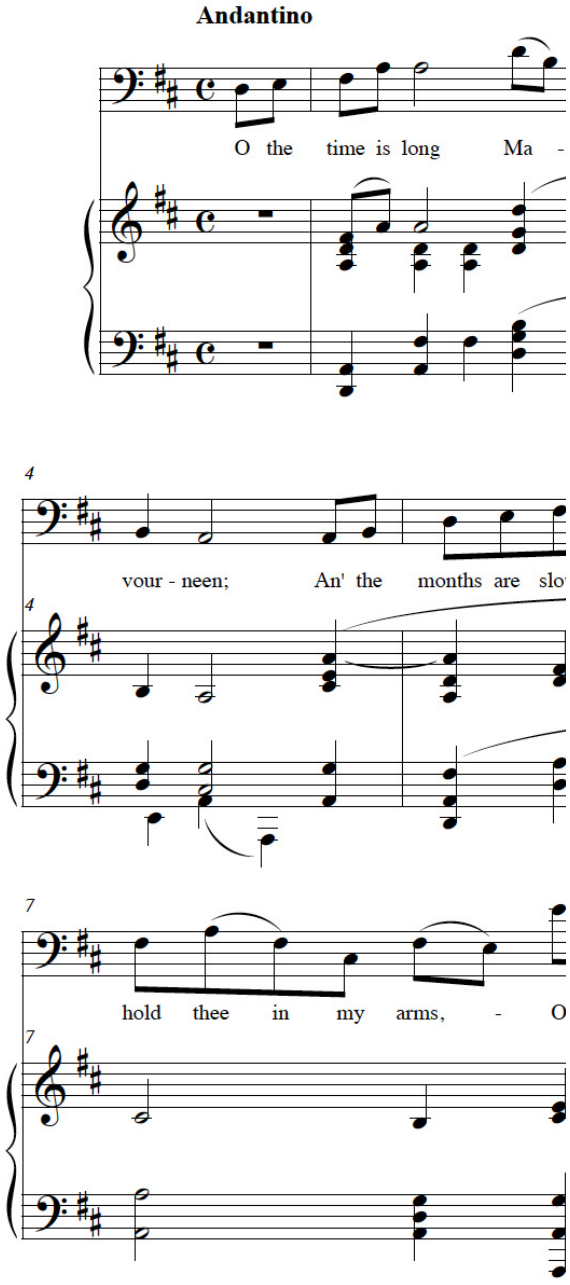
The sections are divided up into measures one through ten, measures ten through nineteen, and measures twenty to the end, measure thirty-five. The elision in measure twelve between the first two parts has to do with the words used in each verse. The B section breaks the minor, major, dominant pattern by adding an echo of the dominant theme and switching the minor with the major.

As the student learns this excerpt, encourage them to find these patterns regardless of the harmony given. The modal shifts are almost always divided by rests, making it easier to remember the scale set necessary. The B section has the most variation of the entire piece, but the student should have enough tools at this point in the etude book to chunk the B section into easier sections. Starting at measure twenty, this section can be split into 2, 2, 4, 3, and 3 measures. Within that, the student could identify sections that are similar to some of the sections in the A sections and also identify significant dramatic moments. This piece presents issues with modality, large intervals, and lack of harmonic motion, but can be used as a good exercise in chunking.

Skills necessary:

- A-flat major and minor scales
- Formal divisions

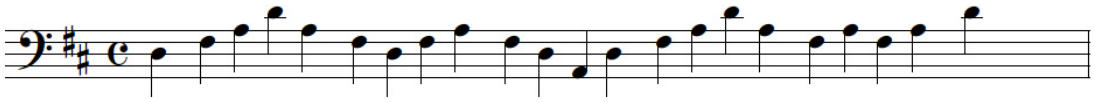
Irish Lo


Andantino
O the time is long Ma -
4
vour - neen; An' the months are slo
4
7
hold thee in my arms, - O
7

O the time is long, Mavourneen,
Till I come again, O Mavourneen;
An' the months are slow to pass, Mavourneen,
Till I hold thee in my arms, O Mavourneen!

Irish Love Song by Margaret Lang is a great opportunity for students to play and learn about modal scales. This piece almost exclusively utilizes the D pentatonic scale, which consists of scale degrees 1, 2, 3, 5, and 6, except for the outlier C-sharp (scale degree 7) in measure 7. When learning a new scale, it is important to not only play it full range, but starting from various points in the scale. With the five-note scale, a student could play a six-note loop, starting on each scale degree of the scale. In doing this, the student will get used to the minor third leaps that are characteristic in pentatonic scales.

Another characteristic of the pentatonic scale is its elimination of notes that create half steps, being scale degrees 4 and 7. This means that the only arpeggios one can create with a pentatonic scale are the tonic arpeggio and the relative minor. This song is strongly tonal, revolving around D as the tonal center. As a memory exercise, it would be a good idea to circle all of the notes that are not part of the tonic arpeggio, so circling scale degrees 2 and 6. This way we are left with the D major arpeggios, showing how tonally rooted this piece is innately. After this, the student could take note of the contours. The outline would look like the following diagram:



The diagram above shows that the piece rises and falls without jumps out of the arpeggio. The last step will be adding scale degree 2 and 6 back into the line to bridge the entire melody back together.

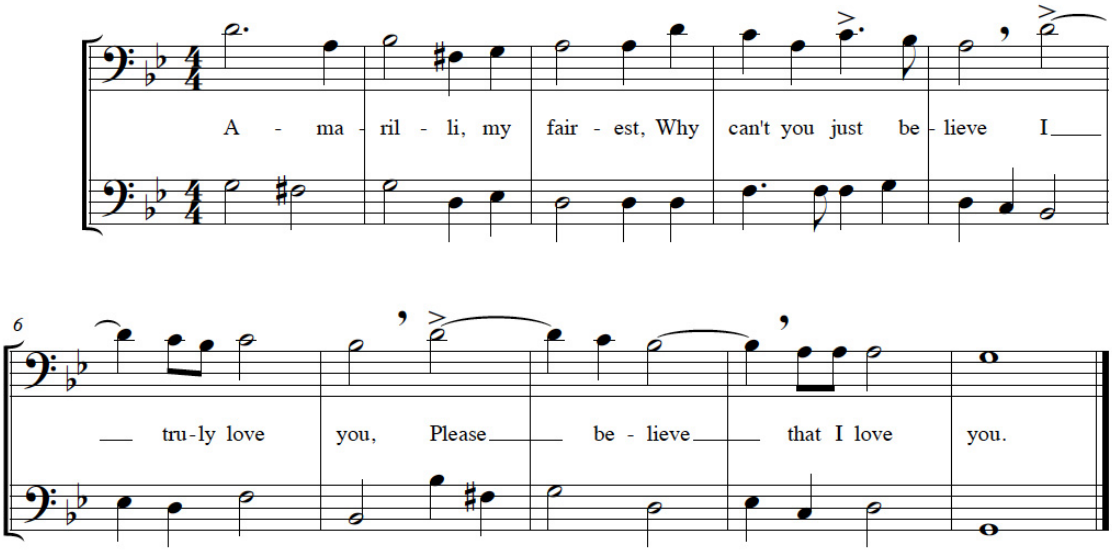
Unlike the songs that were loosely translated in this book (emphasis on loosely), this song was intended to be thought of in English. The student should note some of the text setting patterns, such as the use of the name Mavourneen. It is rhythmically set in similar ways the first three times, and then elaborated more the final time to show the end of the phrase and the exclamation of the text.

Skills necessary:

- D pentatonic scale and major triad

Amaralli, mia bella

Giulio Caccini



Amarilli, mia bella, Non credi, o del mio cor dolce desio, D'esser tu l'amor mio?	Amarilli, my fairest, Why can't you believe I truly love you, Please believe that I love you.

Amarilli, mia bella by Giulio Caccini is a late Renaissance madrigal that was written right around the start of the Baroque era. This piece could become a great exercise for two students to collaborate on together. The soloist can go forth and memorize, per usual, and have a colleague play the basso part, creating a mini performance. Most of the difficulties encountered in this piece are due to the lack of continuity in length of phrases. It will require the student to create chunks based on different material, such as remembering that each phrase starts on a specific note.

The excerpt can be split into four sections, which can be seen starting in measure one, pickups into measure four, beat three of measure five, and beat three of measure seven. Each of these sections start with a sustained D, each of which are treated differently. As an example, the D in measure one is part of a g minor chord, the D in measure three is part of a D dominant seventh chord and the D in measure five is part of a B-flat major chord. Using D as an anchor note will help remind the mind that you are always starting a new thought when you start on a D.

This is also a good memorization strategy for Edward Elgar's *Romance for Bassoon*. Every rehearsal letter has a sustained A, helping denote more formal phrases. *Romance* often uses variations of the opening gesture, seen in measure three with the bassoon entrance. The statements all consist of a rising gesture starting on an A and use sixteenth note syncopation, propelling the line forward. This pattern breaks shortly during the B section, where the key changes from d minor to D major and then resumes at letter H[41]. Analyzing the Caccini excerpt in

[41] Elgar, Edward. "Romance for Bassoon." London: Novello and Company, 1910.

a similar way to the Elgar will make more sense for the player by paying more attention to gesture rather than harmonics.

The lengths of phrases reflect more of a natural speech pattern than perfectly symmetrical music. In studying this piece, the student could easily use his own words to give the inflections more meaning to the individual. The limited amount of notes allows the student to focus on inflection, rhythm, and inferred harmony.

After memorizing this excerpt, it would be an effective exercise to have the student collaborate with another bassoonist and try performing this memorized. The basso part will help show differences in phrases harmonically, influencing the student to show the interest built into the harmonies. The first time a student has to collaborate memorized will be a difficult, yet rewarding experience. It will require the student to understand how the basso part rhythmically and harmonically influences the melody, showing points of tension and release. The basso player will also benefit from having to be hyperaware of what the soloist is doing and how to compensate for any mistakes that may occur.

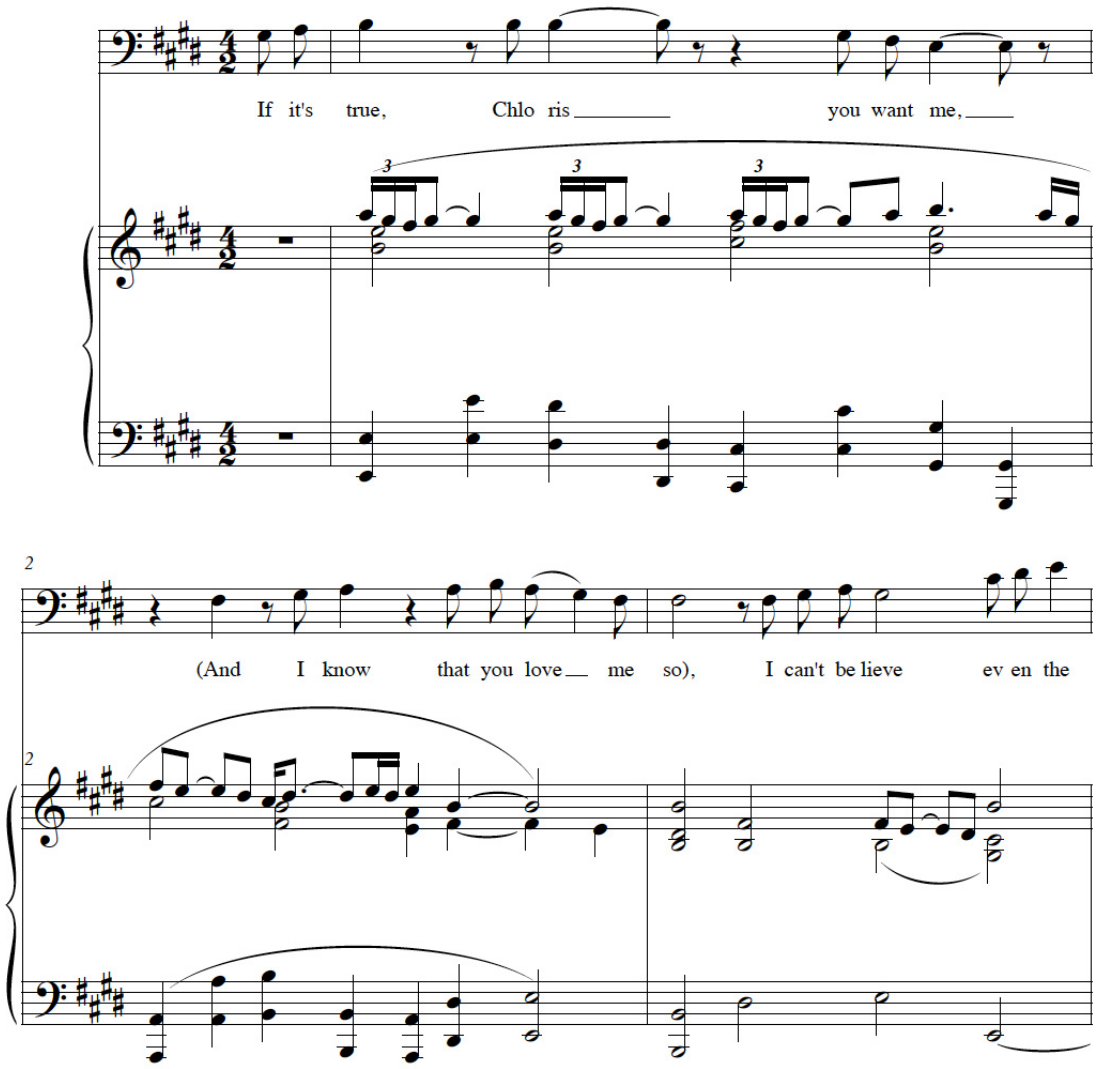
Skills necessary:

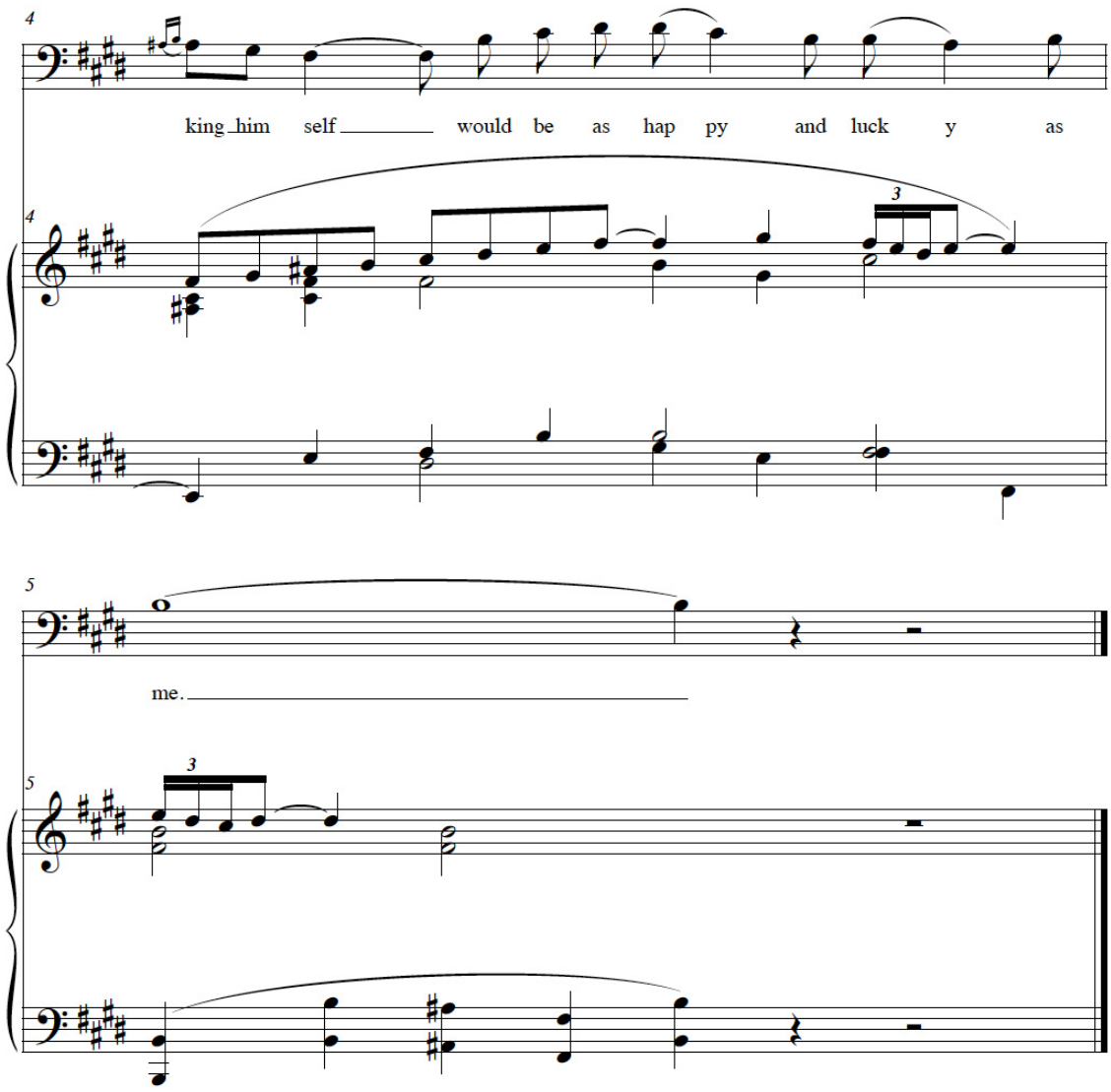
- G minor scale
- Able to play with another person simultaneously

À Chloris

Reynaldo Hahn

Très Lent




4
king him self would be as hap py and luck y as
3
4
5
me.
3
5

S'il est vrai, Chloris, que tu m'aimes, (Mais j'entends, que tu m'aimes bien), Je ne crois point que les rois mêmes Aient un bonheur pareil au mien.	If it's true, Chloris, you need me, (And I know that you love me so), I can't believe even the king himself Could be as happy or lucky as me.

After a firm grasp of identifying scalar motion in the context of songs, *A Chloris* by Reynaldo Hahn will pose additional issues for the student to consider. The slow tempo and asymmetrical phrases create difficulties with flow of air and making sense of the phrases. The vocal line reflects speech patterns rather than what most conceive as a melodic line; it contains natural pauses in the text and does not necessarily fit into the inferred meter.

Hahn is known as a composer who likes to move the listener through time to invoke music of the past[42]. The static accompaniment allows the voice to float over top and embellishment the firmly established walking bass line. The right hand, as seen in measure one, firmly plays half notes on each strong beat while the left hand subdivides with quarter notes. The embellished descant line also seen in the right hand plays a reactionary role against the vocal line. The student must have an ear out for the piano accompaniment in order to stay rooted in the beat.

The form of this excerpt can be identified as a modified sentence: AaB. The A section is the first measure, the a section is the following 6 beats, and the B section is the final six beats. The metric displacement occurs in measures two and three, which coincides with the introspective part of the text denoted by parentheses. The text shows two perspectives: the external singer and the internal monologue. The internal monologue displaces the melody by two beats, but starts with an inferred strong beat on beat three of measure three.

[42] Patrick O'Connor, "Hahn, Reynaldo", Oxford University Press http://www.oxfordmusiconline.com/subscriber/article/grove/music/12169 (accessed September 9 2014).

Text painting really helps portray the poetry accurately. The first measure uses pauses that would naturally occur in speech patterns. As the introspective thought occurs in measure two, you can hear the hesitation and apprehension in the thought being stated. The second section also acts as a response to the first section, which can be seen in the vocal line. The contours are similar, but are set as more of a predominant tonality rather than the very solidly rooted tonic seen in the first section. The last section has the most confident and cohesive text, which can be seen by the longer lines and the sustained notes.

From a tonal standpoint, the student will have to be able to notice the tonicization of B major towards the end of the excerpt. As a student is trying to recognize patterns, it is valuable for them to know when to shift from one key to another. If the student is using solfege or scale degree numbers to help trace contour, they will need to pick a turning point to change their numbers. If I was assigning my own numbers, I would choose the three pickup notes into large beat three in measure four. This location shows the cadential motion and also shows an understanding of the text.

One of the most difficult things for a student may be to make sense of the first two sections. It is continually a problem to show direction in sound when there are built-in silences. As an exercise, the student could fill in the rests by continuing the sustained tones, just for the sake of working on what the direction would sound like. Similarly to when students first start working on the solo from Tchaikovsky's Fourth Symphony, movement two, the student could show direction through sustained notes by subdividing. This will show the exact points in which one would want to crescendo and diminuendo. When the filler notes are taken away, the student will hopefully still feel the momentum that they have engrained into this piece while creating that exercise.

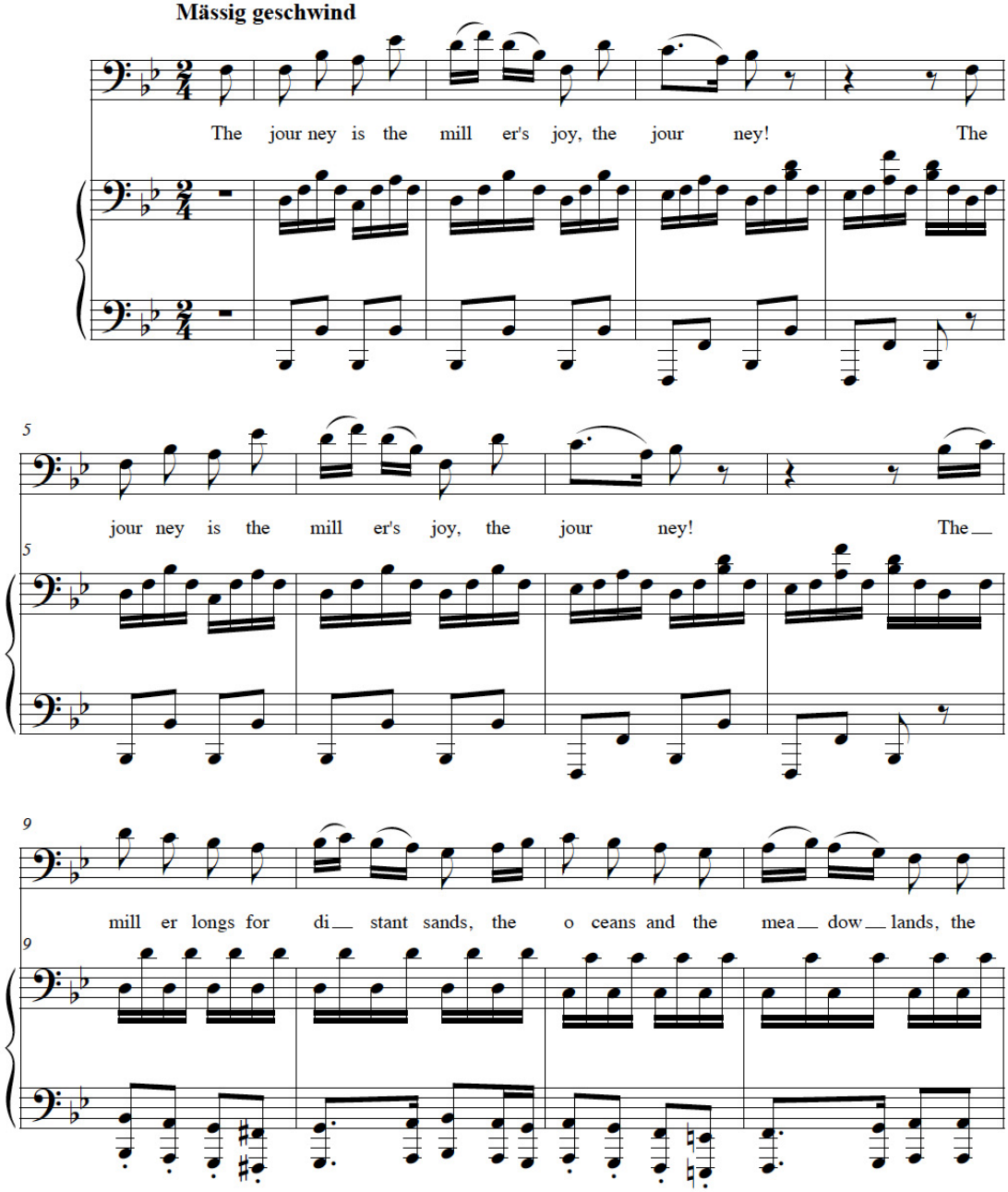
Skills necessary:

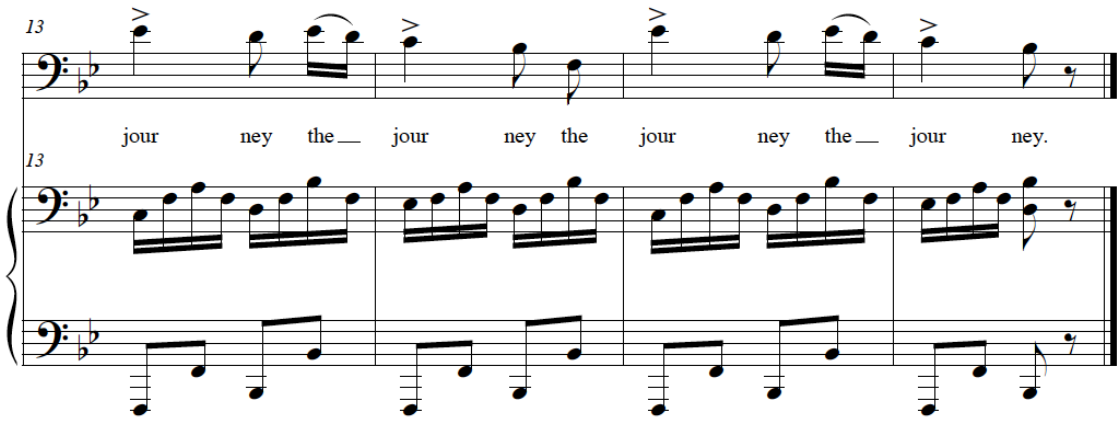
- E and B major scales
- Knowledge of tonicization

Das Wandern

Franz Schubert

Mässig geschwind




13
jour ney the jour ney the jour ney the jour ney.
13

Das Wandern ist des Müllers Lust,	The journey is the miller's joy,
Das Wandern!	The journey!
Das muß ein schlechter Müller sein,	The miller longs for distant sands,
Dem niemals fiel das Wandern ein,	The oceans and the meadowlands,
Das Wandern.	The journey

Pattern recognition is a critical component in analysis. Teachers encourage students to learn major and minor scales, scales in thirds, and arpeggios to accelerate the learning process. Without the knowledge of patterns both mentally and tactilely every piece is new. In the memory world, the recognition of patterns from past experiences is referred to as "chunking". Just as the chess master can recognize scenarios from games past by compartmentalizing certain parts of the board, the expert musician should see everything they have played in the past in a new work, no matter how traditional or avant garde.

"Das Wandern" is the first song in the cycle *Die schöne Müllerin* by Franz Schubert. This piece was selected because of its use of broken arpeggios, repetition, sequences, and chordal structure. This piece is a musical sentence, which is AAB form with a longer B section than A section. The difficulty of memorizing this piece could simultaneously be due to the broken arpeggios. As an example, the first measure moves from I to V. The outline of the arpeggio uses different inversions and interval relationships, making it a little more difficult to remember. This issue can also be seen in the opening four measures of the third movement of the Mozart Bassoon Concerto (K. 191). Similarly to the Mozart, some of the analysis will have to be done across the beat instead of directly on each beat.

Within the chord, the first beat starts in second inversion (scale degree five) and moves to the root (scale degree one). The following beat starts in first inversion and moves to third inversion. If looking at this from a pattern-driven point of view, these intervals would not be

practiced in the same arpeggio exercise. Not only does the added seventh skew the pattern but also the relationship between the inversions; the first beat moves through only one inversion while the second beat moves through two.

The student will have think across the beats rather than one each beat, as mentioned earlier. This is an interpretation concept that is championed by musicians such as Marcel Tabeteau and his students. As explained in David McGill's book, *Sound in Motion*, musical groupings are created by "thinking across the beat". In the context of "Das Wandern", one would be able to connect the broken chords by seeing that the "and" of each beat leads strongly to the on beats and move stepwise. This is the same way one could analyze the relationships between the leaps seen in the third movement of the Mozart Concerto seen in the second measure of the solo bassoon part[43]. Seeking out a linear line out of angular motion will help propel the music forward and be easier to remember.

After the A sections, which are the first eight bars of the excerpt, the B section consists of smoother scalar motion rather than a bouncier sounding arpeggiation. Measure 9-12 can be split into two and two, creating a sequence that moves down by one step. The student will be encouraged to see this as a diatonic melodic sequence to eliminate the potential of thinking too hard. As discussed earlier, the musician has to recognize all music as something that has been previously learned.

"Das Wandern" is a strophic song, which would allow the student to play multiple interpretations and working on creating musical moods. The text given depicts an adventurous miller who yearns to travel and experience the world. As an exercise, the student could create

[43] Wolfgang Amadeus Mozart. "Bassoon Concerto in B-Flat, K. 191." 1774.

new words or a progression to the story of the miller to see what kind of emotions can be created. This exercise will lead to having a wider range to pull from in the future and let the student sort through what kind of nuances are necessary to create a musical mood.

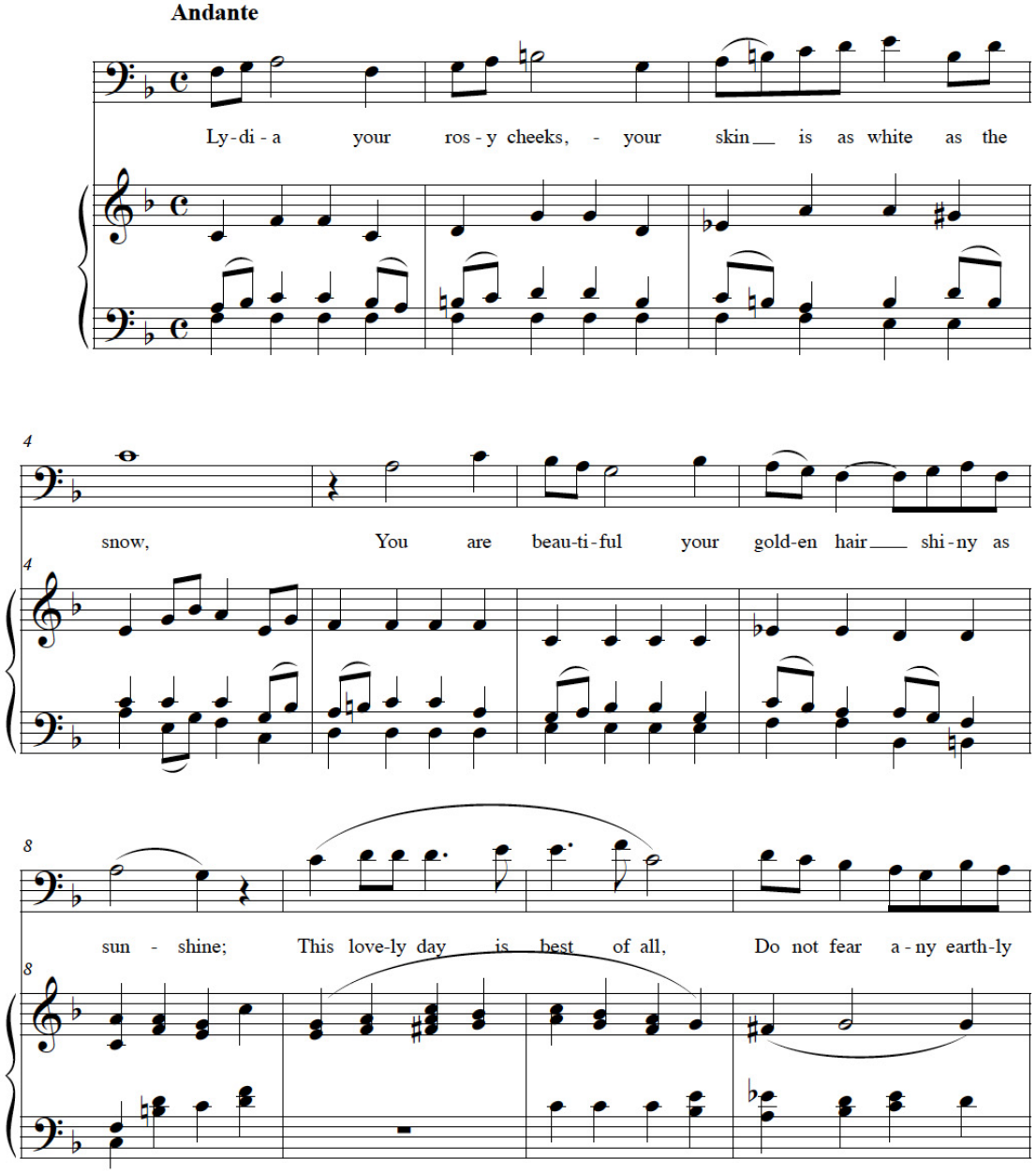
Skills necessary:

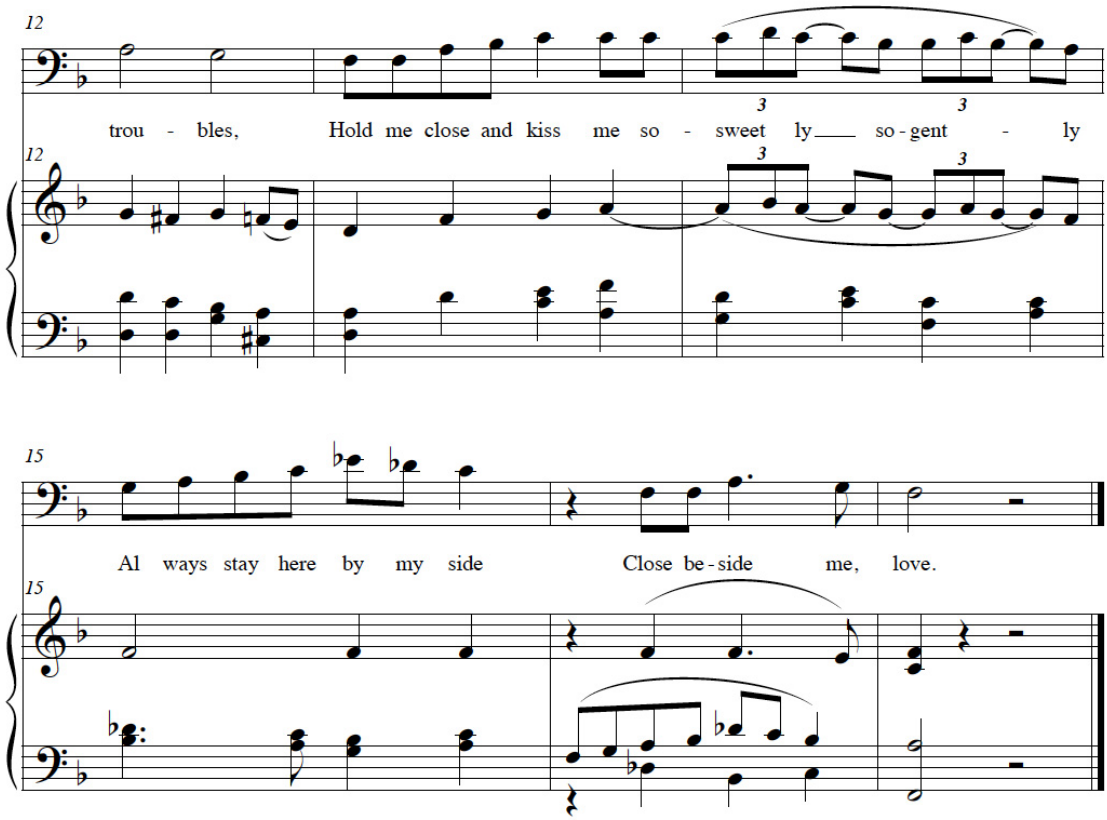
- Broken arpeggios of B-flat major and F dominant seventh chords
- Sequence identification
- Chordal analysis, including secondary dominants
- B-flat major scales

Lydia

Gabriel Fauré

Andante




12
trou - bles, Hold me close and kiss me so - sweet ly so - gent - ly
12
15
Al ways stay here by my side Close be - side me, love.
15

Lydia sur tes roses joues Et sur ton col frais et si blanc, Roule étincelant L'or fluide que tu dénoues;	Lydia, your rosy cheeks, Your skin is as white as the snow, You are beautiful Flowing golden hair shiny bright as sunshine;
Le jour qui luit est le meilleur, Oublions l'éternelle tombe. Laisse tes baisers de colombe Chanter sur ta lèvre en fleur.	This lovely day is best of all, Do not fear any earthly troubles, Hold me close and kiss me so sweetly, so gently Always stay here by my side Close beside me, love.

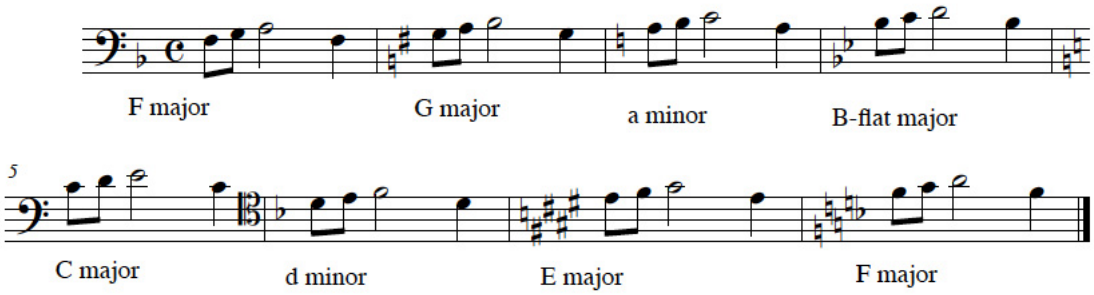
Lydia by Gabriel Fauré combines concepts seen in earlier songs while adding new challenges of tonality. Similarly to *Du bist die Ruh*, this excerpt moves primarily in stepwise motion, allowing the student to recognize scales within the context of the music. When working on this excerpt, it may be helpful to add two visual cues to the music: arrows showing direction and inferred tonal centers. Drawing the contour creates an additional haptic association with the music; the physicality of moving ones hand or arm to draw will utilize a different part of the brain than the analysis the student will do.

As discussed earlier, there are two types of long-term memory: implicit and explicit memory[44]. Explicit memory describes the memory that used to recall facts and things. This memory would include details such as key areas, time signatures, and other analysis-based facts. Goodrich's analysis driven memorization tactics would all fall under explicit memory. Implicit memory is an experience-based source of memory, such as riding a bike. These memories happen naturally without recall of facts. Tactile and haptic experiences lead to implicit memories.

[44] Bruno Dubruc, "The Brain from Top to Bottom" thebrain.mcgill.ca (accessed 09/24/2014).

Teachers need to encourage as many methods of teaching to both aid the student in finding how they learn and to identify holes in a student's skill set. This also allows further engraining of various aspects of the excerpt, including both facts and experiences.

The excerpt begins very simply in the key of F major. Quickly, Fauré moves to G major in the next measure, followed by a minor. These movements form a chromatic melodic sequence. As the student identifies this, they should consider playing the first measure starting on each scale degree in F major. This exercise may look like the following:



The student should be encouraged to try different versions of major and minor for each scale degree; the main focus is hearing and feeling the pattern. Additionally, this exercise should help the student identify the patterns built within the excerpt. Shifting through tonal centers becomes less daunting when they are seen as different scales rather than individual chromatic notes. The rest of the excerpt starting in measure five, excluding measure fifteen's brief visit to B-flat melodic minor, stays in the key of F major and can be analyzed by scale degrees for the student.

Measure fourteen presents issues in text setting. The author made the decision to follow the accent pattern that Fauré originally used. The syllables do not naturally lie well, but that may be seen as a further mnemonic if it is remembered as the off kilter measure. The melody moves by step, using the repetition in the pick up notes to beats one and three as emphasis. Using the teachings of Tabuteau and the drawing exercise described earlier, dynamics become implicit and add more life to the excerpt. Teachers should insist on dynamics and expression from the onset of learning because dynamics are equally important in the memorization process. Every component of performance needs to be memorized together as a joint effort. When learning, the student could describe attributes, but it is necessary to perform all components simultaneously.

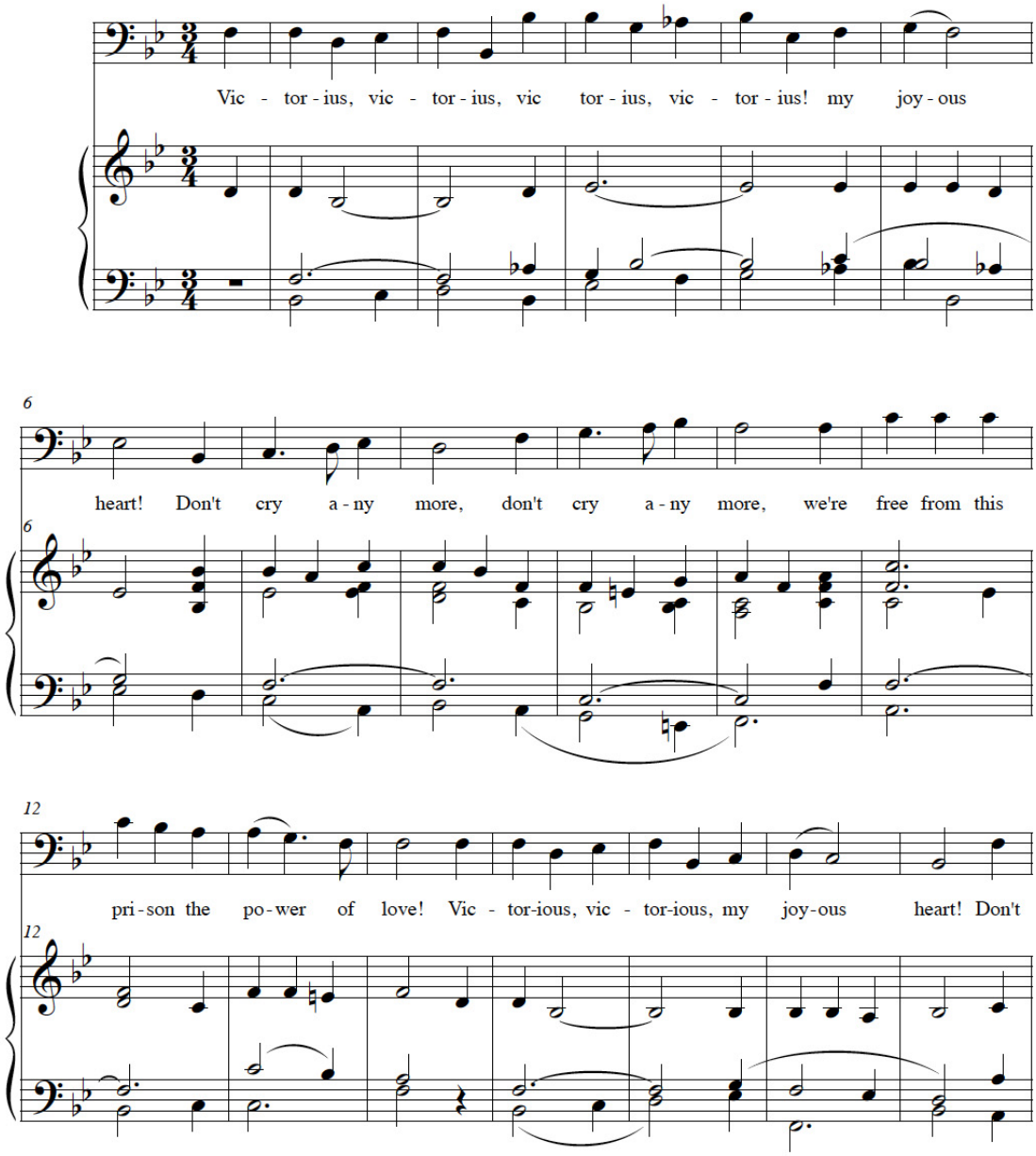
Skills necessary:

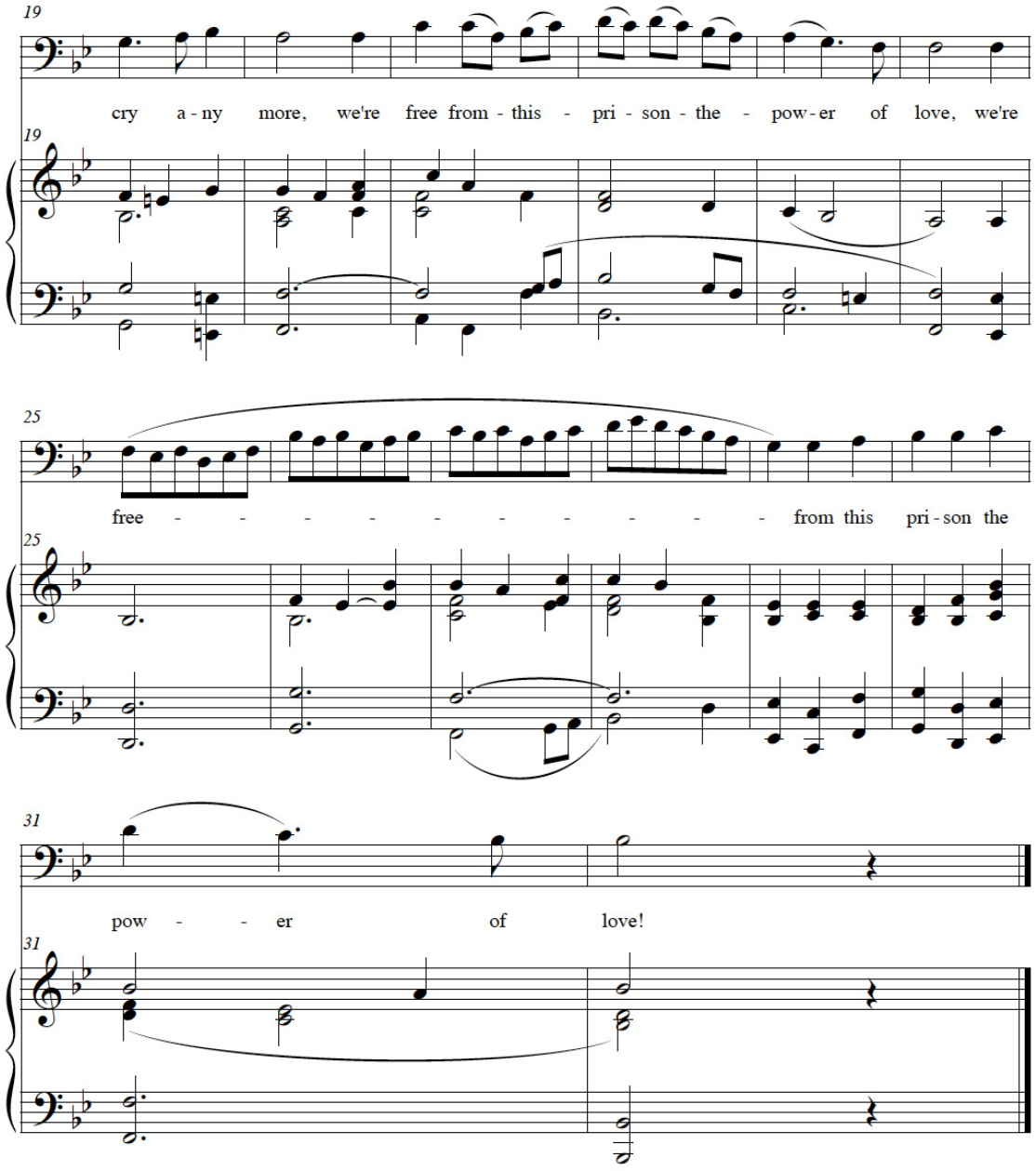
- Scale degrees
- Local key areas
- Keys of F major, G major, a minor, and B-flat melodic minor

Vittoria, mio core

Giacomo Carissimi

Allegro risoluto




19
cry a - ny more, we're free from - this - pri - son - the - pow - er of love, we're
19
25
free - - - - - - - - - - from this pri - son the
25
31
pow - - er of love!
31

Vittoria, mio core!	Victorious, my joyous heart!
Non lagrimar più,	Don't cry any more
È sciolta d'Amore	We're free from this prison
La vil servitù.	The power of love!

Melisma in song shows the virtuosity in a singer, but can be typical sort of line for an instrumentalist. *Vittoria, mio core* by Giacomo Carissimi uses the flourish of Italian baroque that bassoonists see mostly in Vivaldi. Because this is a memory project, it is vital to break down the sequences into smaller segments in order to identify patterns, rather than memorizing every note. An additional difficulty seen in this piece is the ability to highlight the tonicizations that occur.

Right from the beginning, the use of A-flat in measure three creates a dominant seventh in IV, moving us quickly to E-flat. The E-natural in the voice part and in the left hand in measure nine act as the third in a dominant chord in V, leading to a tonicization of F major. Carissimi's quick jaunts through closely related keys help sort out formal differeneces.

The formal structure of this excerpt is AB(aab)AB^{1}(abb). The divisions within the parentheses show the period which makes up the B section. The B^{1} breaks the original period and truncates by not including a second a section. Instead, an embellished ending based on the b section closes out the excerpt. These sections are determined primarily by rhythmic motives and melodic material.

A	a	a	b	A	a	b	b
E-flat	B-flat	F	F	B-flat	F	F	B-flat

In the final b section, the melismas that occur could be difficult to grasp onto without an understanding of the patterns present. The first thing to do is establish the main note; generally this is the first note of the sequence. In this instance, starting in measure twenty-five, the main notes are F, B-flat (in measure twenty-six), C, and then the pattern breaks in measure twenty-eight on the D. Before diving into the other notes of each measure, the student should play the skeleton (the main notes) in order to hear how the music progresses. In this instance, it rises in order to build intensity through the repetition.

The sequence presented starting in measure twenty-five can be split into two ideas: a lower neighbor note and a rising figure to the main note. In practice, it is helpful to draw a dividing line between the two ideas to remind the brain that it doesn't have to be memorized as six notes in a row, but rather three notes at a time related to the main note. In order to engrain the sequence, an exercise can be created by playing the sequence on every scale degree in the key of B-flat. This same exercise was used in Lydia. This same concept of relating the measure to the main note of each measure can also be used in measures twenty-one and twenty-two.

An additional tool that may help in memorizing sequences is use of arrows to show contour. Sometimes the act of drawing in specific directions can help by remembering the motion. It also takes away the importance of the individual notes and puts more emphasis on contour, the main focus of sequences. This excerpt is filled with repeated patterns and should be treated as such. As soon as the student gets too fixated on individual notes, the act of memorizing becomes cumbersome and discouraging.

Skills necessary:

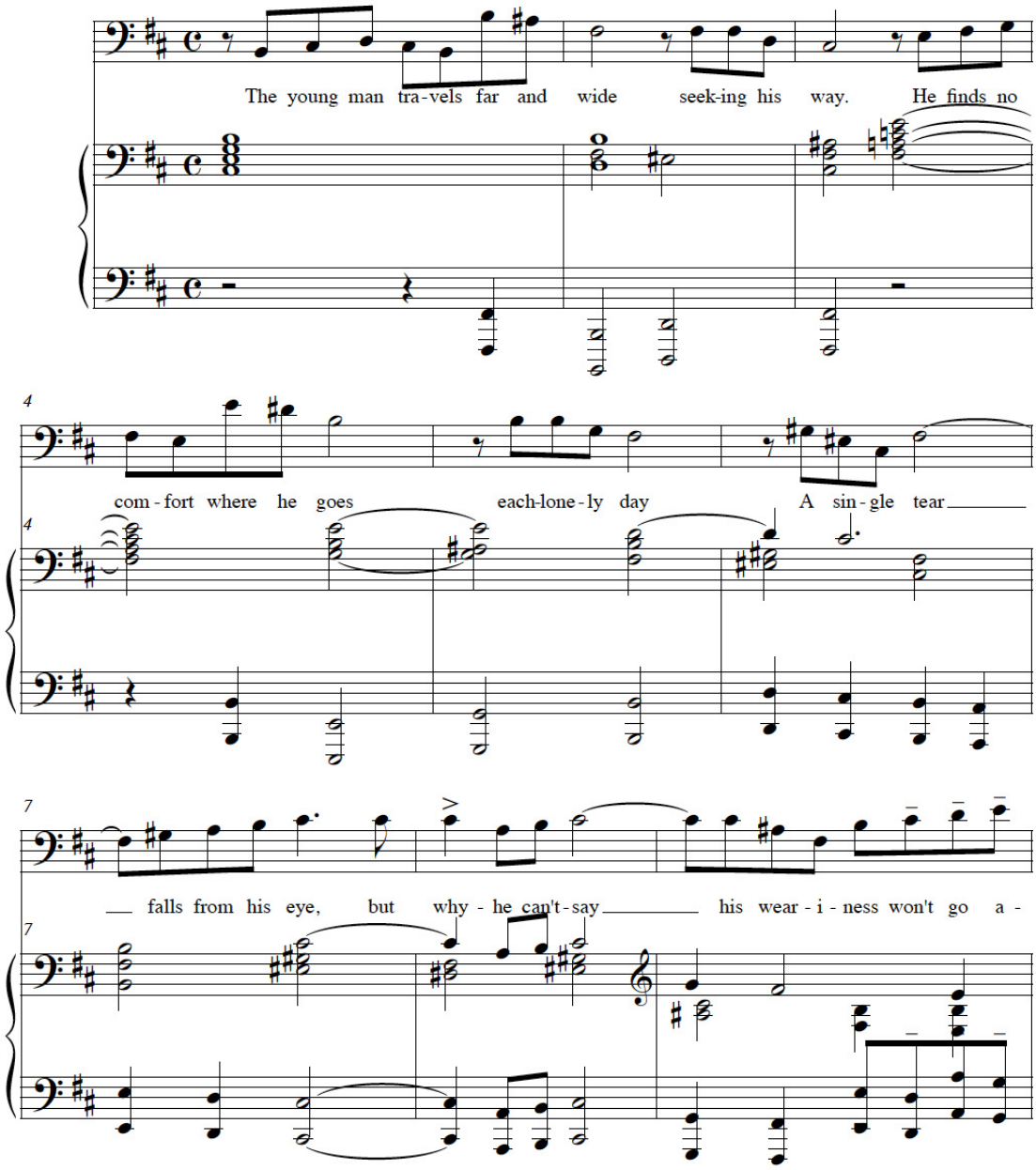
- Pattern recognition and labeling
- B-flat, E-flat and F-major scales

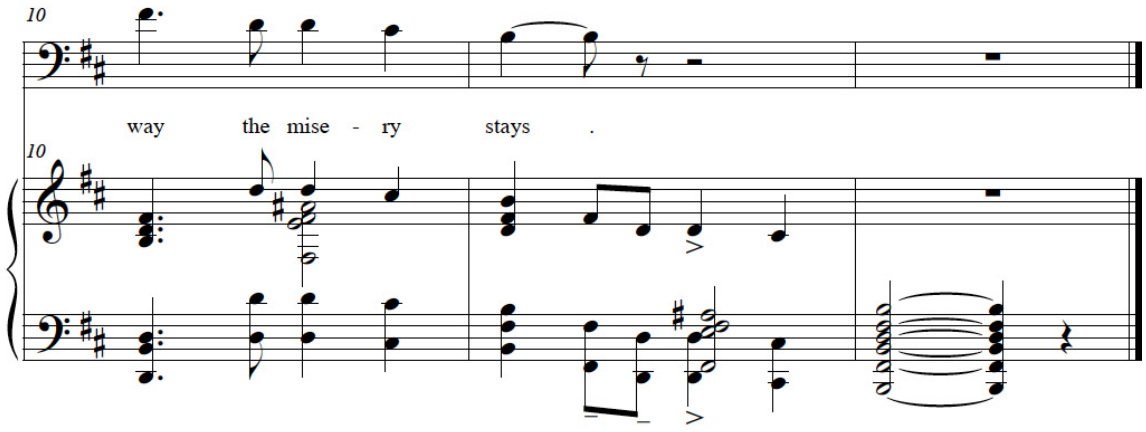
- Ability to show meter (slow one vs. fast three)

Guten

Edvard Grieg

Poco Andante




10
way the mise - ry stays .
10

Du ferer vidt og du verdt trøytt og Foten skjer.	The young man travels far and wide seeking his way.
Du græt, so Puta ofte bløytt af Taarer er.	He finds no comfort where he goes each lonely day,
Med dette Salt du vaskas ut, til dess du fær	A single tear falls from his eye, but why he can't say
i deg den sleipe, hvasse Lut, som Livet tvær.	His weariness won't go away, the misery stays.

Edvard Grieg's Song "Guten" from *12 Songs, Op. 33* uses irregular phrase lengths and repetition to show the anguish portrayed in the text. Additionally, the use of wide intervals creates a sense of drama, which can be seen from the first measure. From measure one, the listener can feel the uneasiness of the text because of the strong use of $ii^{Ø7}$in the piano instead of a strong i chord to start. As the vocal line descends from its apex to scale degree 5 on the downbeat of measure two, a v-i resolution occurs, resolving the tension established earlier.

As mentioned earlier, this excerpt uses gestures that do not necessarily fall on bar lines. The first phrase goes from measure one through beat two of measure three, making a ten beat phrase. This phrase is then repeated in the subdominant (e minor). While learning this part, it is advantageous to think about these phrases in scale degrees rather than individual notes in order to expedite the learning process. This can be also seen as two types of gestures: a quick rise and fall returning to scale degree 1 and a falling gesture to a sustained note. The two falling gestures, which can be seen on beat four of measure one and the three pickup notes into measure three can be seen as part of a tonic arpeggio that is evaded by scale degree 2.

Measure six also uses the falling gesture but outlines a dominant chord going to scale degree 1 instead. This variation is important to note because it is the same motion that is used to

push back into b minor in measure nine. Once again, the student should try to think of these gestures in terms of scale degrees and function rather than individual notes.

The excerpt as a whole can be mapped with key areas. Measures one through beat two of measure three are b minor, beat three of measure three through measure five is e minor, measure six through eight are in f-sharp minor, and the remaining material returns to b minor. This structure lends itself towards a Schenkerian approach because of the identification of tonic, pre-dominant, dominant, and tonic motion. If the student can map out this structure, suggest also trying to describe the motives used in relation to the established key areas. Elements such as contour, relationship, rhythm, and large intervals can be aspects for a student to hone in on and a way to build a vocabulary for descriptions.

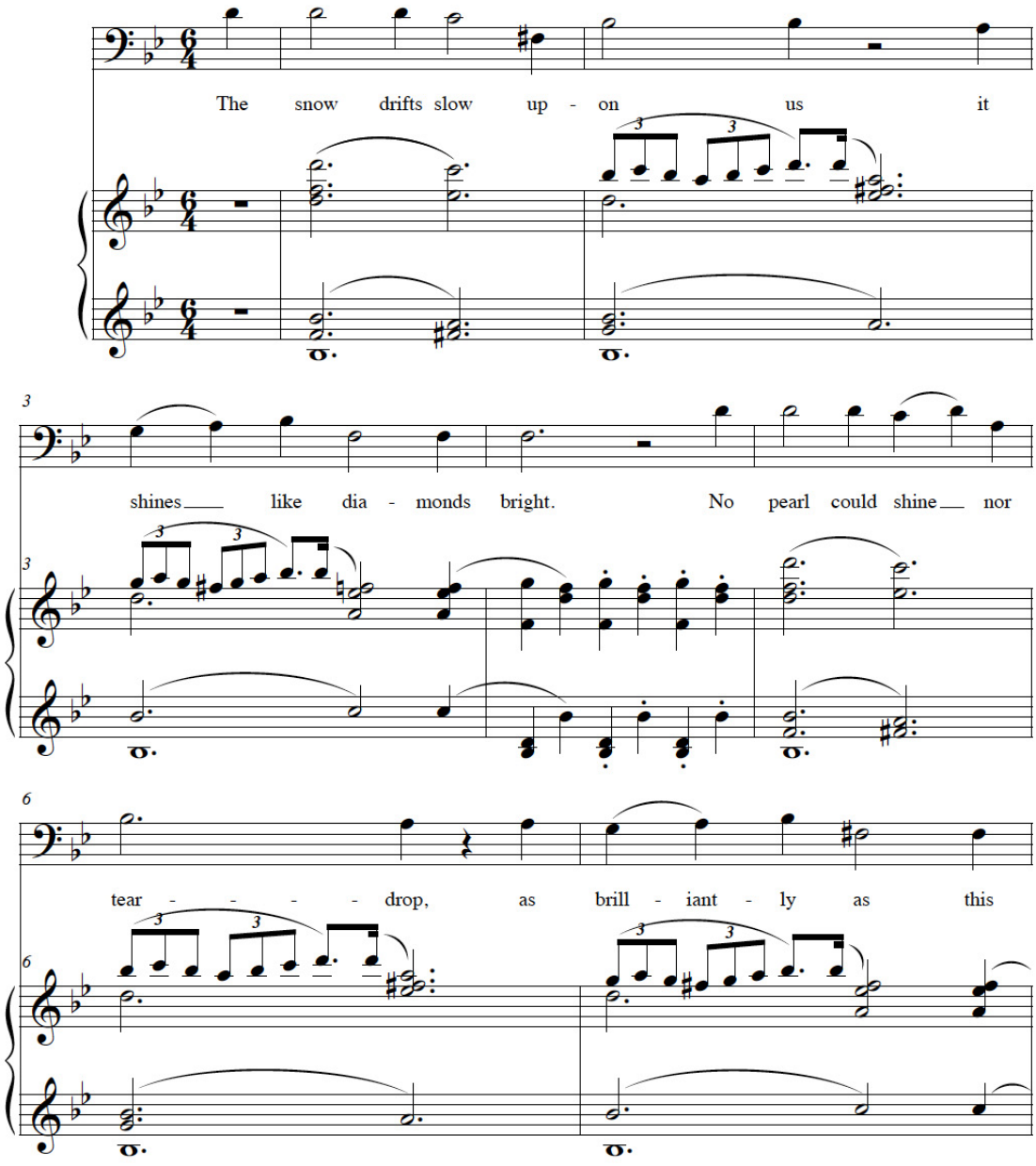
The road map of an excerpt will lends itself towards a created narrative by the student. Retelling a story requires a recollection of fragments in a particular order. Teachers should strongly encourage students to be able to explain the structure and elements of pieces for further memory. It is unreasonable to have a student memorize music without a strong comprehension beyond the individual notes. This type of recall can include musical fragments, but also emotional fragments. It is better for a student to remember that "they are coming up to the sad section" than remember nothing at all. Through the entire process of memorization, the student should embrace every way that they absorb the new material.

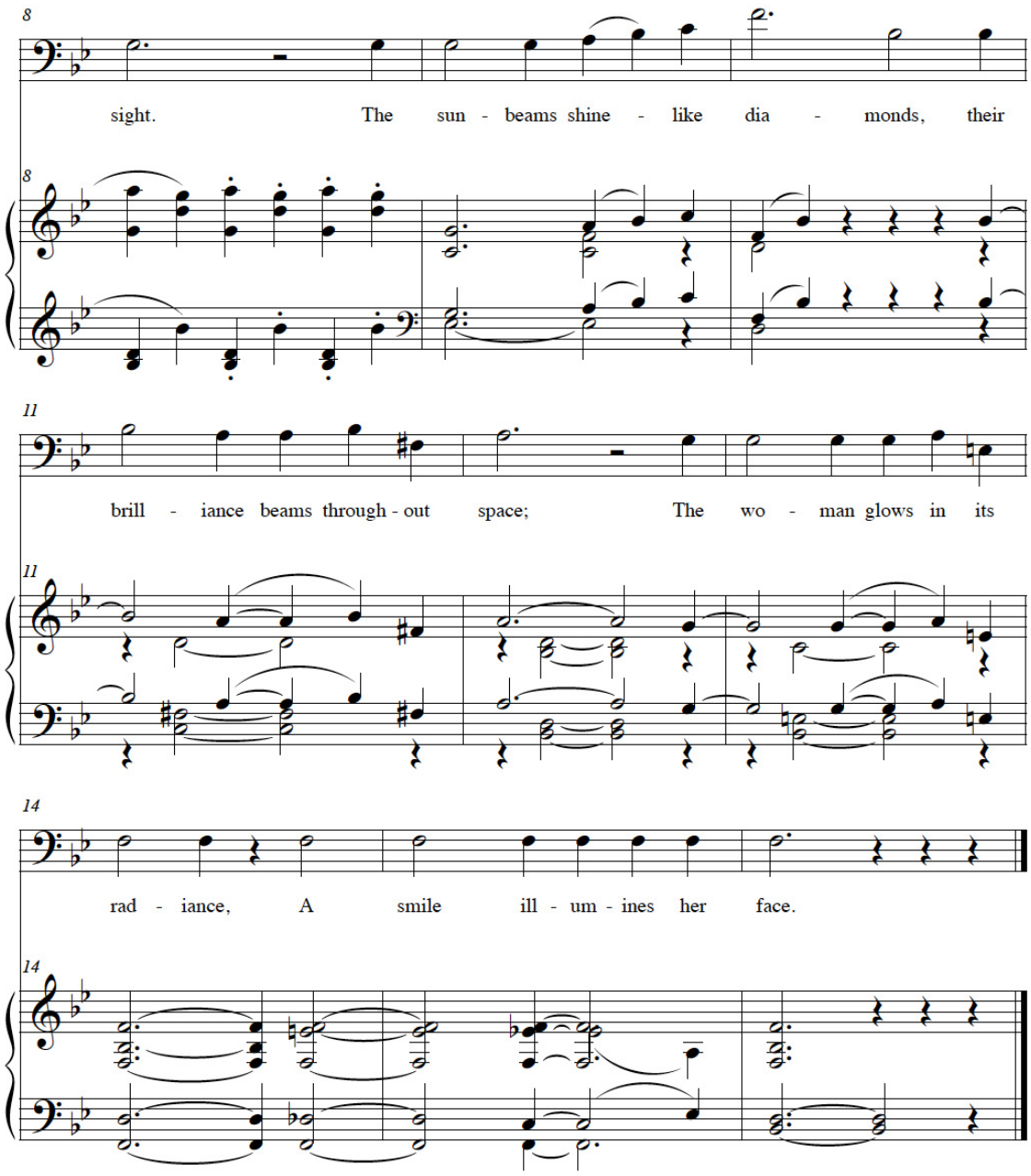
Skills necessary:

- b, e, and f-sharp minor scales and arpeggios
- Tonic and dominant chords
- Pattern recognition

Demanten På Marssnön

Commodo **Jean Sibelius**




8
sight. The sun - beams shine - like dia - monds, their
8
11
brill - iance beams through - out space; The wo - man glows in its
11
14
rad - iance, A smile ill - um - ines her face.
14

På drivans snö där glimmar en diamant så klar. Ej fanns en tår, en pärla, som högre skimrat har.	The snow drifts slow upon us it shines like diamonds bright. No pearls could shine, nor teardrops, as brilliantly as this sight.
Utav en hemlig längtan hon blänker himmelskt så: hon blickar emot solen, där skön den ses uppgå.	The sunbeams shine like diamonds, their brilliance beams throughout space; The woman glows in its radiance, A smile illumines her face.

Ambiguous key signatures present an issue in memorization. As an initial step, students should identify the key so scale degree relationships can be established and remembered. *Demanten Pa Marssnön* by Jean Sibelius creates equal significance between the relationship of g minor and B-flat major. This issue will prevent the student from remembering notes in relationship to a tonal center, but will allow the student to pick whichever center is easier for them to remember at the time.

The first approach to this excerpt could be identifying which measures are related to g minor and which are related to B-flat major. From a visual standpoint, memory points can be created in every section divided by rests. The excerpt present is a musical sentence, meaning that the first half consists of smaller sections and the second half is made up of longer phrases. From measure one through measure eight, there are four two bar phrases. Starting with pickups into measure nine, there is one four bar phrase followed by two two bar phrases that belong together and give a downward motion to the excerpt as a whole.

The use of F-sharp is the cue for the student to relate the phrase to g minor because F sharp is the leading tone and acts as an integral part of the dominant chord in g minor. Following this rule and the divisions from above, the first, fourth, sixth (measures eleven and twelve) phrases are in g minor. The phrases that are in B-flat major are phrase two, three, five, and eight. The only phrase not mentioned is the seventh phrase, which is a secondary dominant in F major

because of the use in E-natural. This phrase just naturally leads to the eighth phrase, which consists only of F-natural. This kind of analysis can only work when disregarding the accompaniment and should only be used as a mnemonic in order to remember which notes are used and how to relate them to each other. When using the piano part in the analysis, the keys will be parallel (g minor, B-flat major, g minor, b-flat major corresponding with the first four chunks).

The most confusing part of this identification system is that the beginnings of each phrase seem to move ambiguously towards the opposite key. For further explanation, consider the first phrase. The descent from D to C in the first bar can easily be seen as either scale degree 5 to 4 (g minor) or scale degree 3 to 2 (B-flat major), which are both viable options when looking at tonal music. The piano part shows that we start with a B-flat major chord on beat one, a clue to starting in B-flat major. By big beat two, the music has quickly moved to ii^{o7} in g minor with use of F-sharp. In the next phrase, which is measures three and four, the music start on A. This can be seen as a leading tone in B-flat major or as the super tonic in g minor. With this kind of confusion, the player has to make a conscious decision on how they want to try to remember the phrases. Without a sense of confidence, it will be easy to forget what is coming up next.

In addition to thinking about each phrase independently, it is important to think about how each phrase is related to the next. This can be analyzed by how the last note of a phrase leads to another, or how phrases can parallel each other. When looking at the parallels, the phrase structure of the excerpt looks like the following: $ababcc^{1}$. The a sections all start on D, the b sections all start on A, and the c sections all start on G. This could be a valuable thing to note only because some of the relationships between consecutive notes between phrases would be more difficult to remember (leap-wise motion).

The last thing a student could do with this excerpt is identifying notes that pop out of the contour. This can prevent confusion when thinking about intervallic relationships. As an example, the F-sharp in measure eleven should be identified out of the context of the preexisting contour. Without the F-sharp, the notes only oscillate between B-flat and A, making it much easier to remember. In the following phrase (measures thirteen and fourteen), this can be simplified as motion from G to F, as long as the last two beats of the measure are seen as a double neighbor tone to F. All of these notes that don't move by step or arpeggio make more sense after being identified as such.

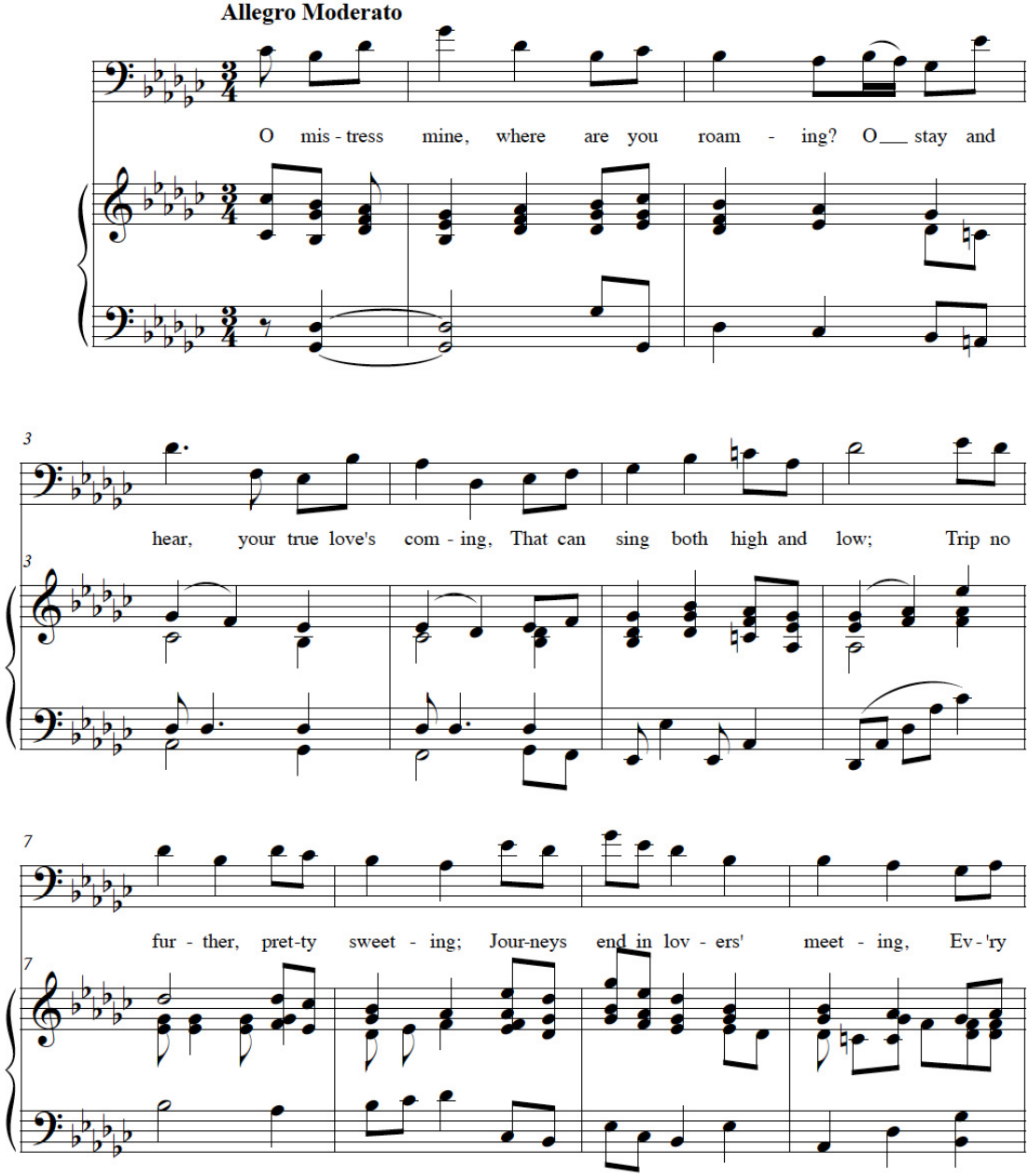
Skills necessary:

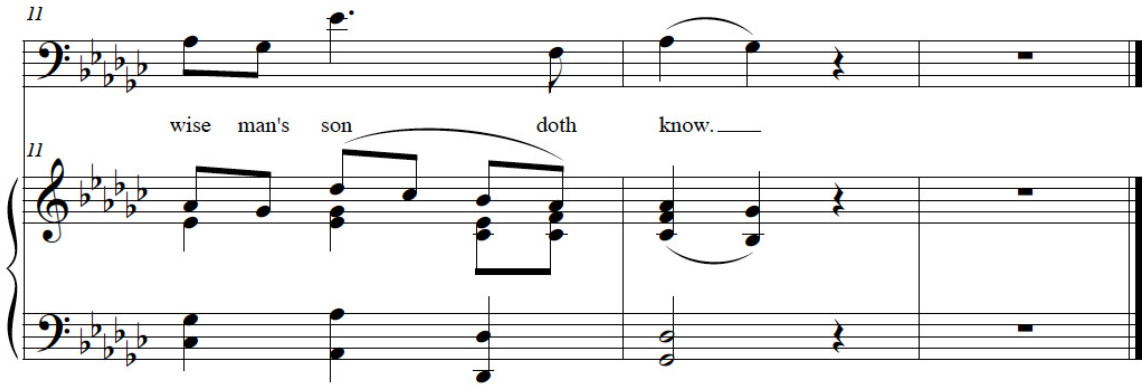
- B-flat major, F major, and g minor scales
- Pattern recognition
- "Out of contour" tones

O Mistress Mine

Roger Quilter

Allegro Moderato




11
wise man's son doth know.
11

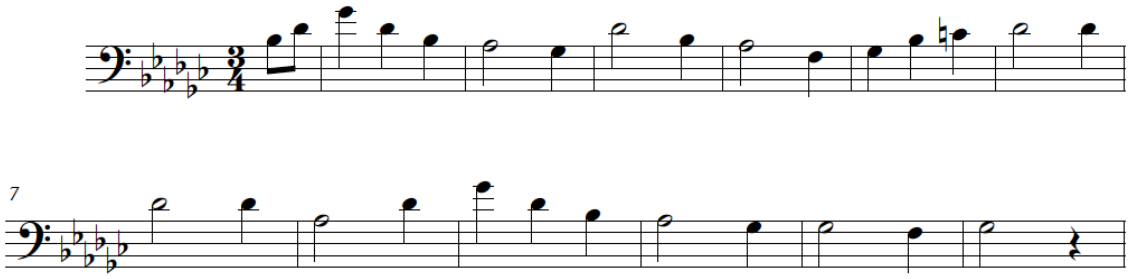
Trip no further, pretty sweeting;
Journeys end in lovers' meeting,
Ev'ry wise man's son doth know.

O mistress mine, where are you roaming?
O stay and hear, your true love's coming
That can sing both high and low.

Roger Quilter's *O Mistress Mine* will give students the opportunity to memorize an excerpt that is not in a friendly bassoon key. Besides being in G-flat major, topics such as non-chord tones and secondary dominants return. This excerpt can be considered an easier excerpt in terms of structure; however, a challenge in performance for most players. One of the main goals of this excerpt is to make this song as fluid as it would be if it was in the key of F major or G major. The half step relationship between the leading tone and tonic need to sound as effortless instead of the sound of slamming every finger down on the instrument and trying to squeeze the G-flat into submission.

The exercises one could do with this excerpt are divide up the sections and mark all non-chord tones. This excerpt is a simple binary form split at measure seven. The pickup notes into measure eight are the beginning to the second half of the excerpt. The half cadence in measure six leads to a moment of a secondary dominant, seen with use of C-natural in measure six. After a tonic chord in the key of D-flat on the second beat of measure seven (tonic delayed by an appoggiatura in the right hand of the piano), we quickly resume G-flat major at the beginning of the second section. The repetition seen in measures eight and nine lead to the high point of the exercise. The copied gesture of two eighth note pickups followed by two quarter notes is broken in the supposed third iteration by adding two addition eighth notes on the downbeat of measure ten. This helps show the high point in the phrase and further tension in the outlined G-flat major chord.

When marking nonchord tones, the student should note appoggiaturas, escape tones, and neighbor tones. By establishing the nonchord tones, the student will notice that most of the motion in this piece is by arpeggio or by step. Escape tones of scale degree six are commonly seen throughout this excerpt, such as the E-flat at the end of measure two and the B-flat at the end of measure three. In order to understand the general structure, playing a structural skeleton may help show the natural progression of the melody, as seen below:



Lastly, the student needs to be hyper vigilant about the tone created while playing in this difficult key. When playing in a difficult key, it is often hard to hear what notes are determining musical decisions due to the instrument. To solve this issue, encourage the student to record this excerpt twice: once in the key of G-flat and once in the key of G. The only thing to note to the student is that the C-natural in measure six will become a C-sharp in the key of G, because it is a raised scale degree. The student should compare the two performances to hear what notes stick out by accident and if they are getting the phrase and gesture across that they intended. As an example, the student will most likely hear timbral issues between scale degree five (D-flat) and scale degree one (G-flat). The D-flat is often more muffled in color while the G-flat is strident

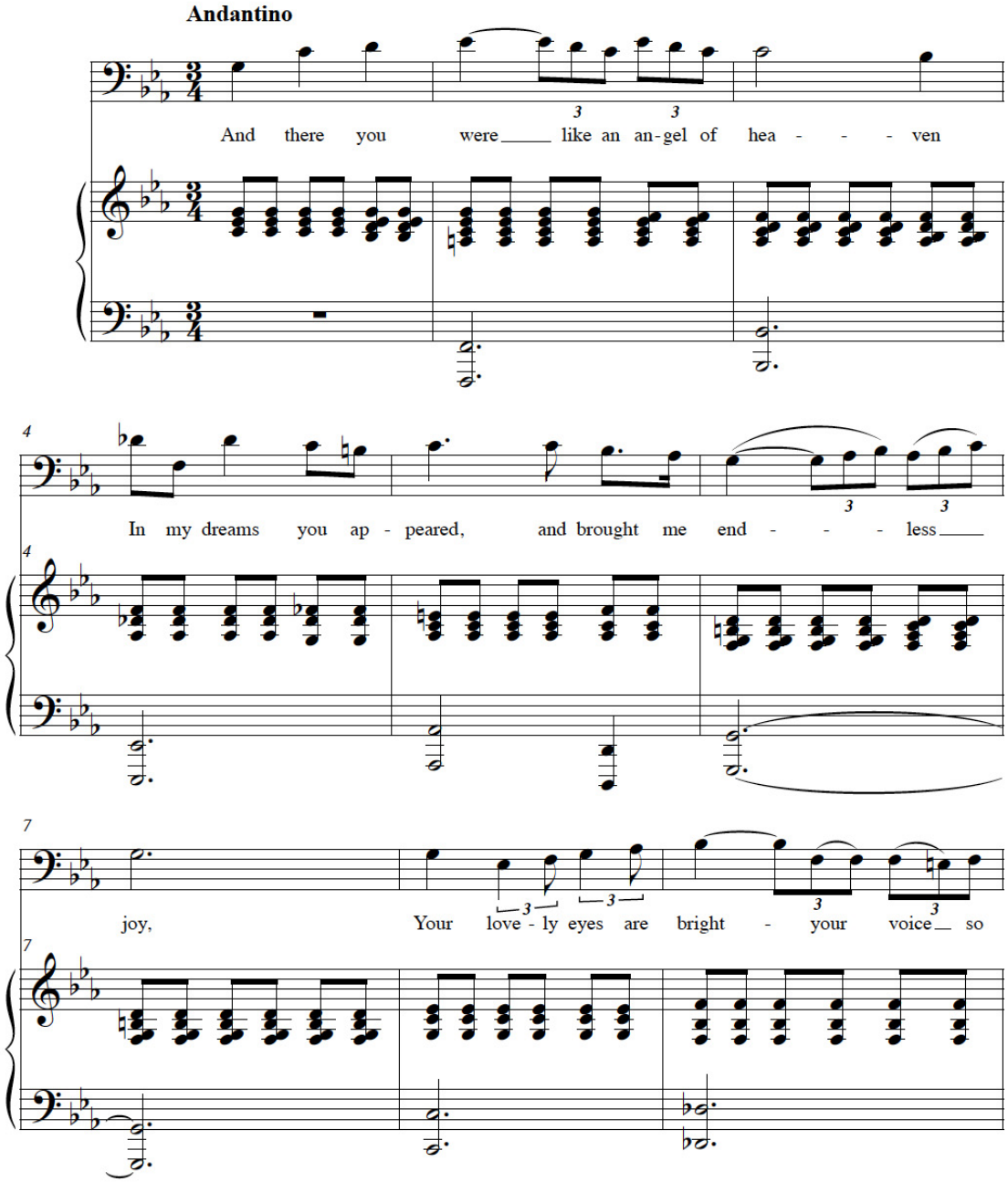
and also high in pitch. Special attention and practice will be required to get the notes to sound similar. This sort of practice necessitates critical listening and problem solving in order to decide what sound they like and how to best make the rest of the notes sound similar. Luckily, this excerpt allows for these difficult decisions without too difficult of a contour.

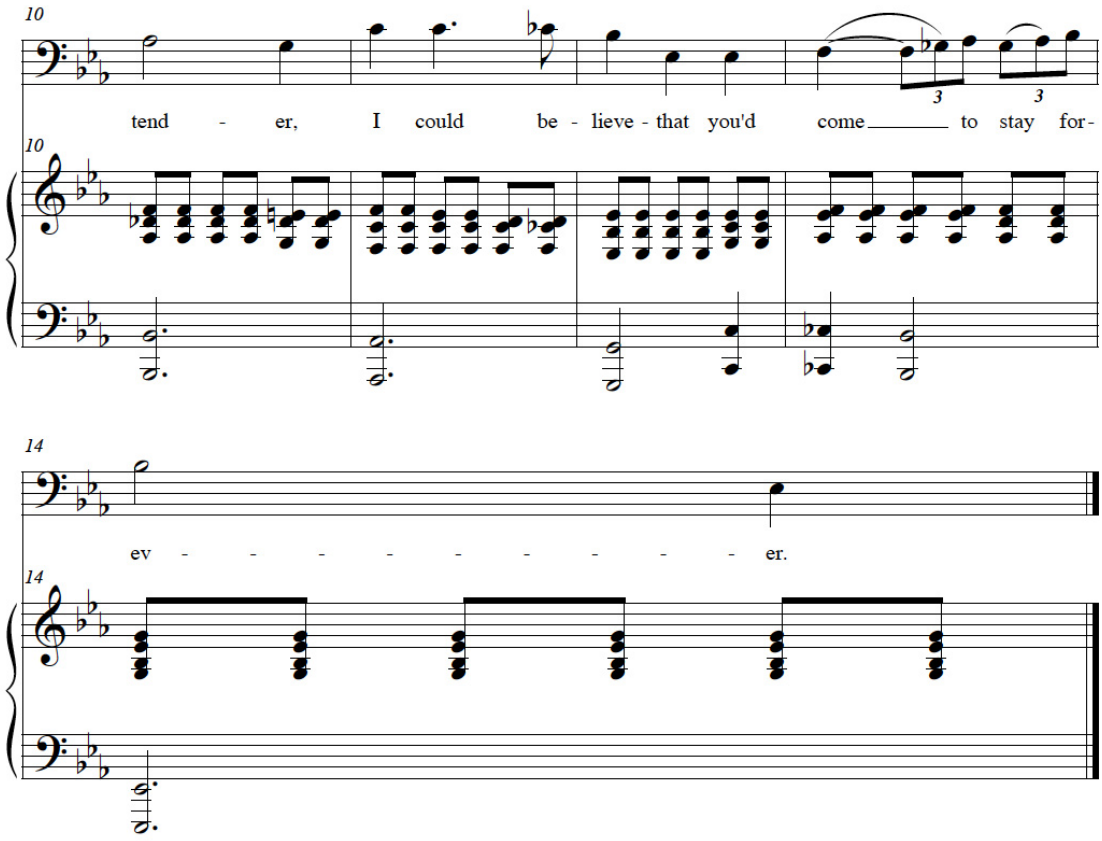
Skills necessary:

- G-flat and D-flat major scales (G and D for the parallel exercise)
- Nonchord tones
- Basic structural analysis
- Ability to change timbres of notes
- Critical listening

Après un Rêve

Gabriel Fauré

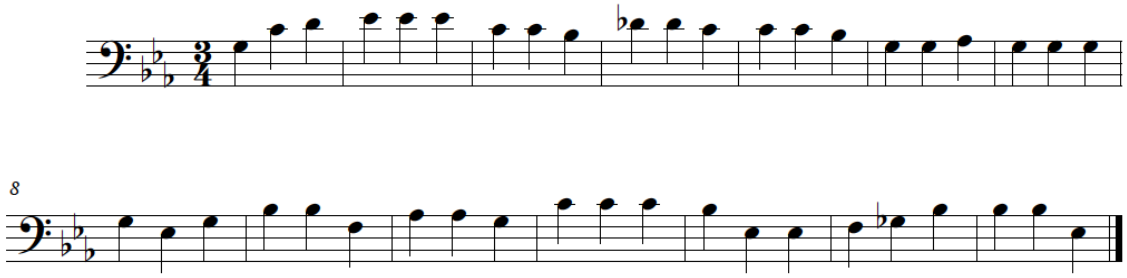



10
tend - er, I could be - lieve - that you'd come to stay for-
10
14
ev - - - - - - - - - er.
14

Dans un sommeil que charmait ton image Je rêvais le bonheur, ardent mirage,	And there you were like an angel of heaven In my dreams you appeared, and brought me endless joy,
Tes yeux étaient plus doux, ta voix pure et sonore, Tu rayonnais comme un ciel éclairé par l'aurore;	Your loving eyes were bright, your voice so tender, I could believe that you'd come to stay forever.

Après un Rêve by Gabriel Fauré oscillates between c minor and E-flat major, interchanging between the two smoothly. The difficult parts of this excerpt are remembering which key area to think in and how to keep track of the transitional measures.

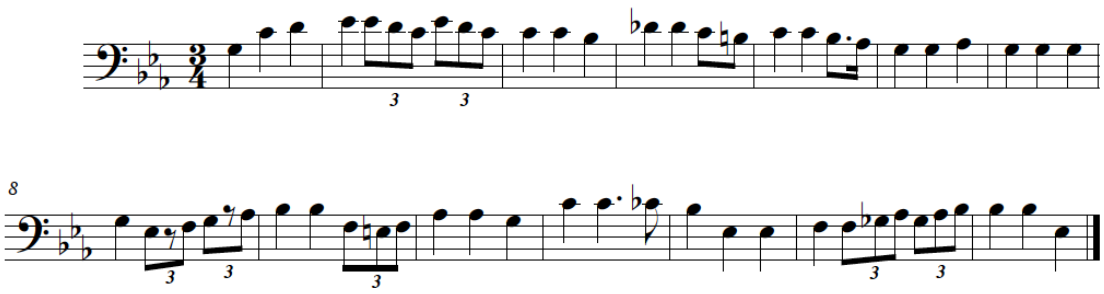
Musical skeletons help show longer harmonic motion, eliminating notes that pop out of the texture and distract from the line. In this exercise, the student can play quarter notes on each beat. The exercise would look like the following:



This outline shows the half step motion in measure three more clearly along with the E-flat major arpeggio in measures eight and nine. Some parts of this have been further clarified however some of the jumps do not make as much sense. This skeletal outline shows the following tonal sections: c minor from measure one through measure seven, E-flat major from measures eight through measure nine, c minor from pickup into measure ten to the downbeat of measure eleven, and an elided E-flat major starting with the downbeat of measure eleven to the end of the

excerpt. The G-flats seen in measure thirteen are quickly resolved in the piano. These key areas do not have to be set in stone, but they do absolutely have to make sense to the person performing.

The next exercise would be to add the step-wise notes back in. By doing this, the bridges between measures two and three, among other measures, will be clearer. This next step will look like the following exercise:



From this point, there are only a couple of escape tones and the ties left to add back into the texture. Fauré's use of colorful harmonies initially presented an issue, but by breaking down the structure and analyzing how the notes relate to each other, the excerpt has become much more manageable.

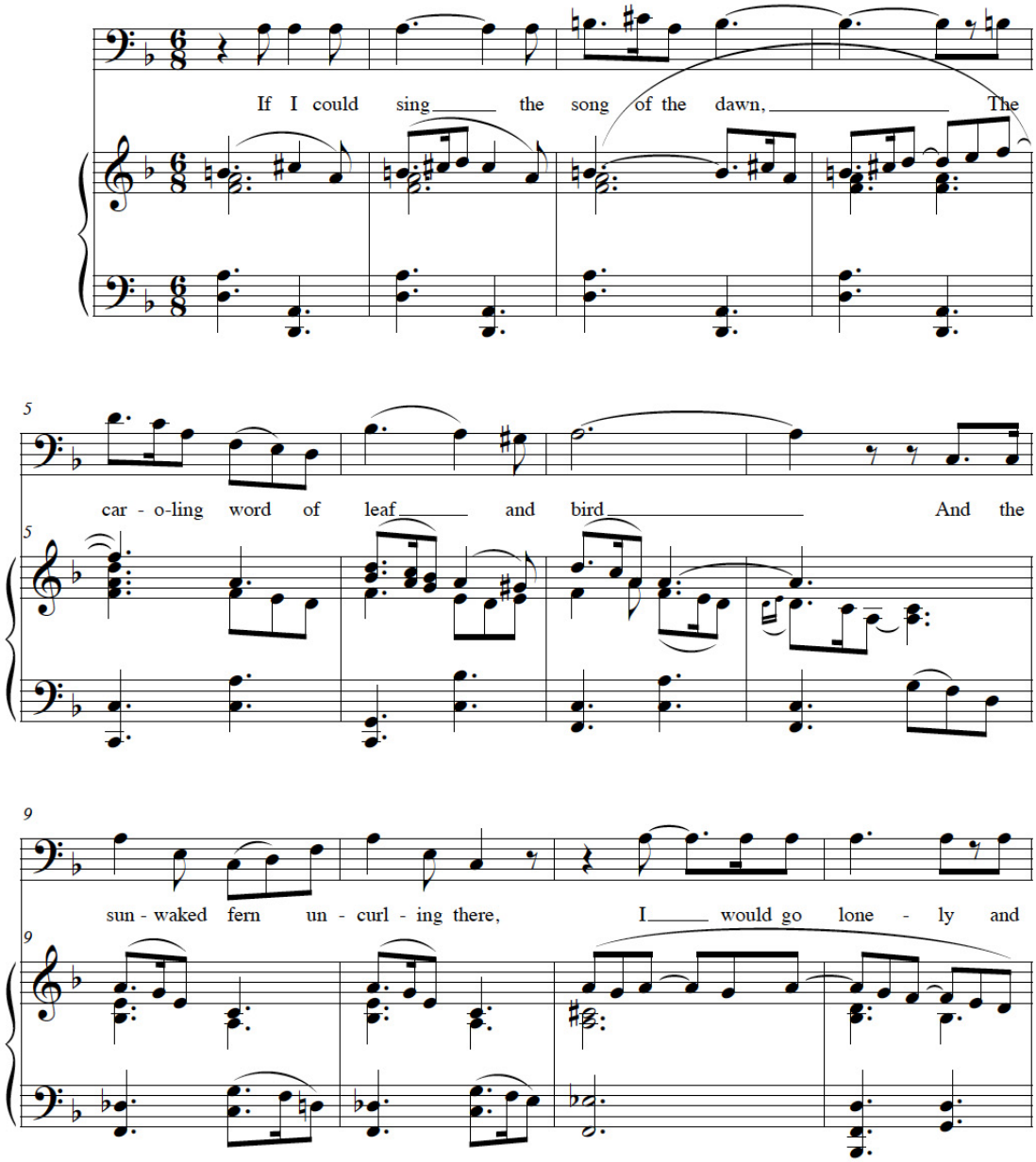
Skills necessary

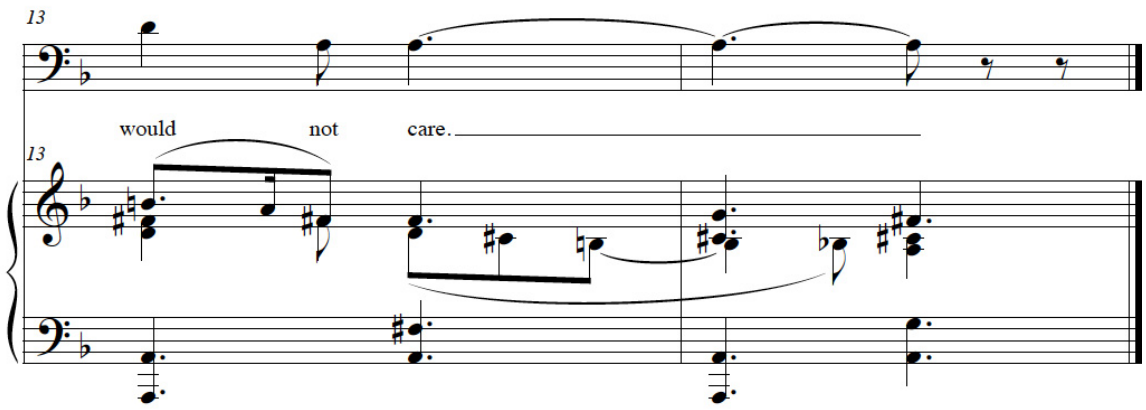
- c minor and E-flat major scales
- Able to pick out main notes to create outline

Mine be the lips!

Amy Beach

Andante caminando




13
would not care.
13

If I could sing the song of the dawn,
The caroling word of leaf and bird
And the sunwaked fern uncurling there,
I would go lonely and would not care.

This excerpt from *Mine Be the Lips!* by Amy Beach gives the opportunity to consider each phrase with different tonal clusters. The left hand of the piano mainly uses fifths and octaves to outline what should be the tonal centers, d minor and F major. These open intervals, however, are accompanied by a melody that completely disregards rules of traditional tonality.

The top line in the right hand of the piano part starts outlining the tonal cluster that can be used for the first small chunk from measure one through measure four. There is a very circular gesture going between B, C-sharp, and A. The vocal part starts on A, which acts as a fifth to the D minor set up in the bass line. The vocal line stays planted on the A until the third measure, in which it copies the piano part rhythmically from measure two, but keeping to the circular motion which ends up sustaining one whole step up on a B.

The next tonal cluster changes to a dominant to tonic harmony in the key of F major. The B sustain from the previous phrase jumps to a D, which can be seen as an escape tone when moving towards a C-F tonal realm. The descending motion creates ambiguity between F and d because of the common tones used in each of their tonic arpeggios. The student can think in either key as long as it has significance to them. The jump up the B-flat in measure six can be seen initially as a dramatic jump to flat six, but really ends up acting as a suspension to scale degree 3 in F major, which is resolved in measure seven.

The third chunk is a descending and rising gesture that can be practiced in a loop. The pivoting moments between the A and C are filled with an E while descending and D and F while ascending. This can be looped together as a five-note pattern, creating displacement and forcing

the fingers to get used to the pattern. Another idea is thinking of them oscillating between a minor and d minor arpeggios, giving them more tonal significance to each other. Students should always be encouraged to think of new ways to practice unfamiliar patterns, including rhythmic variety, transposition into different keys, and extending the pattern further in range.

The last chunk simply consists of a sustained A that moves briefly to a D on the downbeat of measure thirteen and then quickly moves back to A. The most difficult part of this section would be to remember the rhythm, which is hopefully where the words will help out. If the words that are set do not help, the student should use words that will be remembered, no matter how silly they may be. By looking at the text given, there are two kinds of voices: first person and a descriptive voice. When the person sings in the first person, the notes do not move as quickly and have more rhythmic difficult. Use of rests and ties show human-like qualities in the text. The descriptions of nature move more rapidly, giving more emphasis to the music rather than the text. In the last segment, notice that the most emotive words are the words that have the longest note values: lonely and care. With these things to note, the student will hopefully be able to remember the syncopated rhythms present.

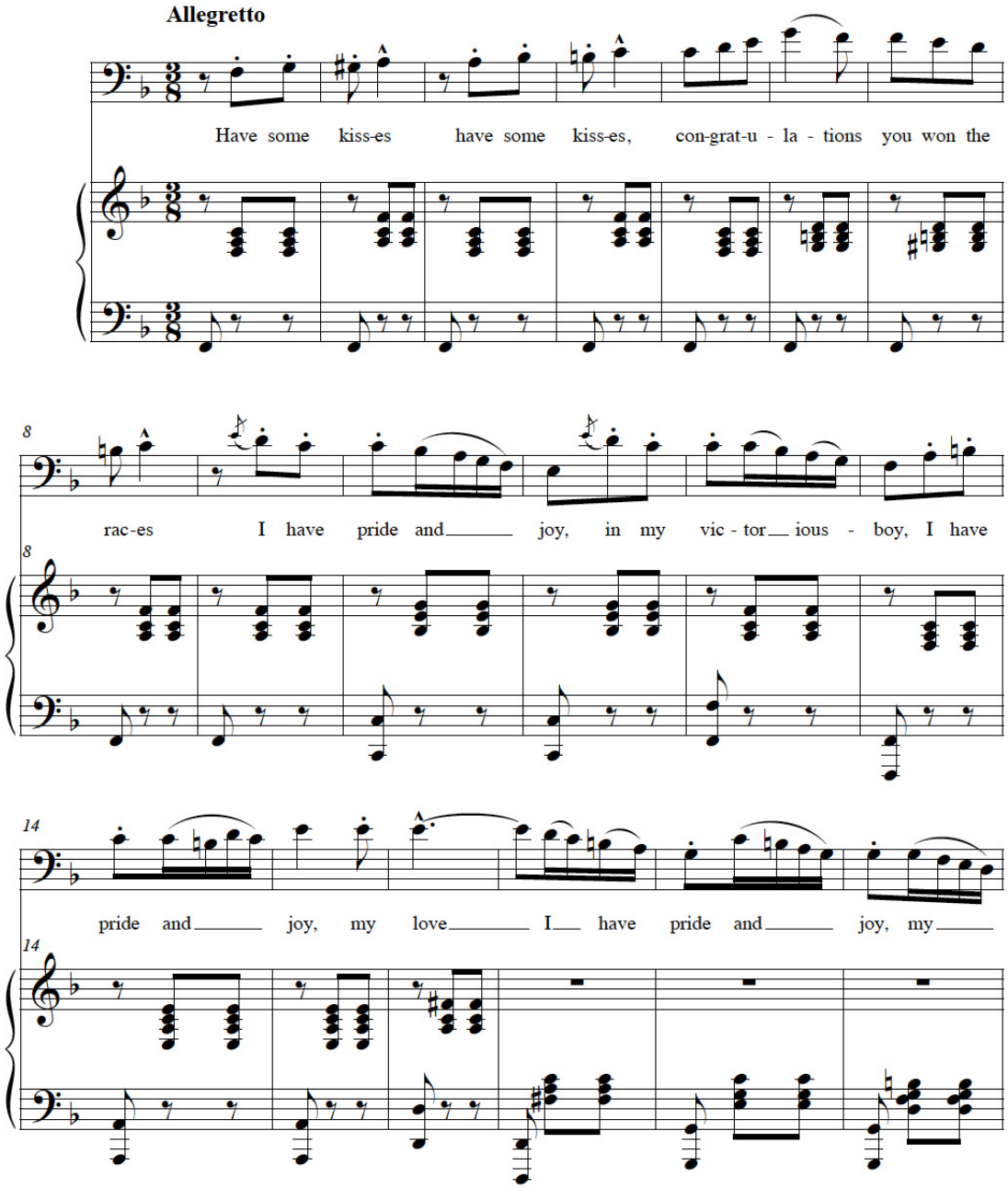
Skills necessary:

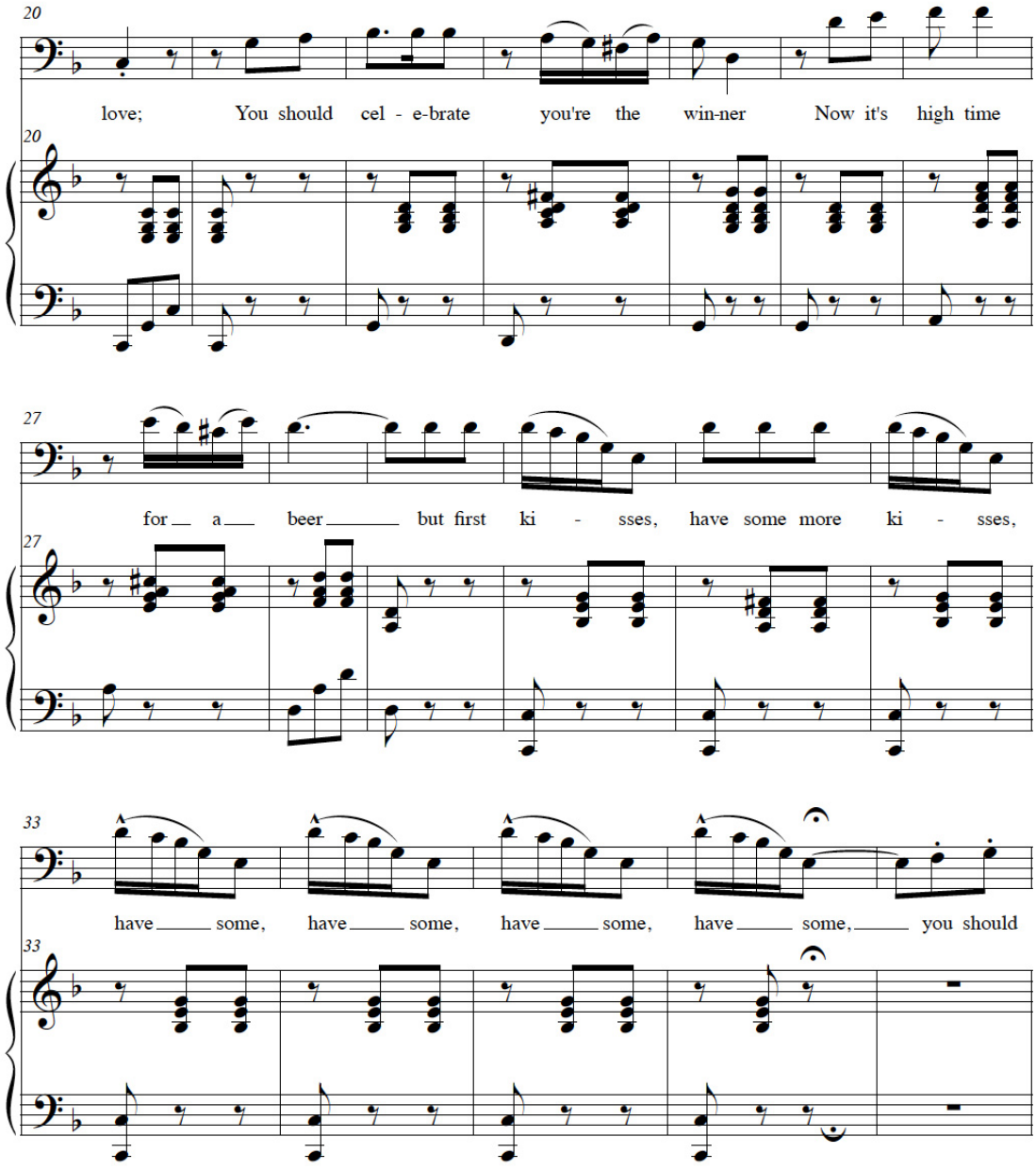
- Creation of tonal groupings
- F major and d minor scales

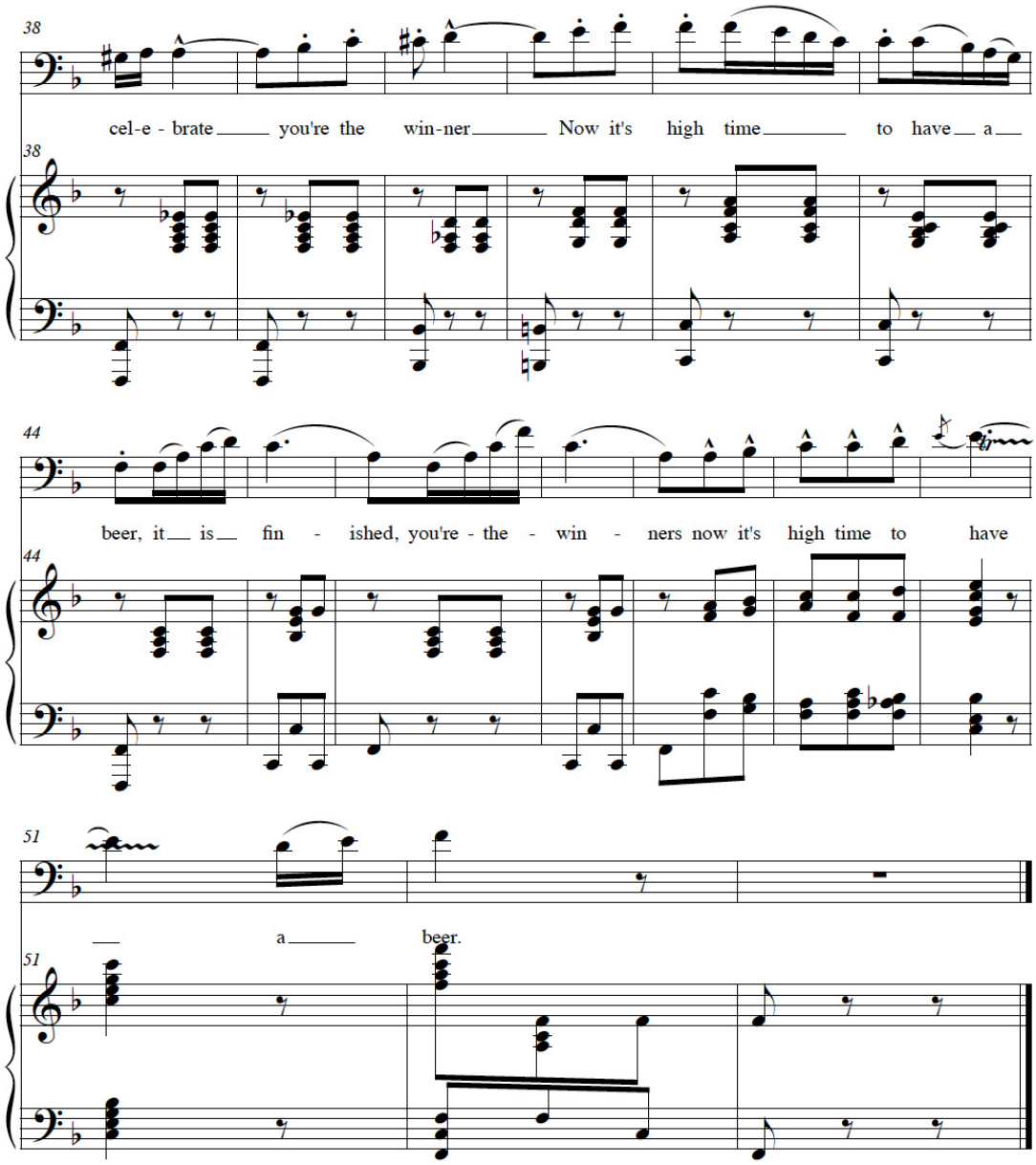
Anzoleta dopo la regata

Gioachino Rossini

Allegretto




20
love; You should cel - e-brate you're the win-ner Now it's high time
20
27
for a beer but first ki - sses, have some more ki - sses,
27
33
have some, have some, have some, have some, you should
33


38
cel-e - brate you're the win-ner Now it's high time to have a
38
44
beer, it is fin - ished, you're - the - win - ners now it's high time to have
44
51
a beer.
51

Ciapa un baso, un altro ancora,
caro Momolo, de cuor;
qua destrachite che xe ora
de sugarte sto sudor.

Have some kisses, congratulations, you won the races
I have pride and joy, in my victorious boy,
I have pride and joy my love;
You should celebrate, you're the winner
Now it's high time for a beer.

"Anzoleta Dopo La Regata" is the third song in a set of three by Gioacchino Rossini about a boat race in Venice. The third song lends itself well towards teaching because of the forms within forms seen in this piece. The entire piece is an ABA form, but the excerpt selected is only the first A section. Within the A section, there is another ABA form, moving from I-vi-I, showing how easy it is to move from the major to key to the relative minor key. The A section is from measure one through measure twenty, the B section is from measure twenty-one through the fermata in measure thirty-six, and the final A section is at the repeat of the A theme in measure thirty-seven through measure fifty-two. All of those sections encompass the larger A section of the piece.

The ABA form gives the student an opportunity to identify different kinds of cadences and indicate what kinds of notes are used to tonicize and what kind of notes are just passing embellishment. As an example, the use of half steps in the second and fourth measures are used as additional leading tones to outline a larger F major arpeggio. By adding the chromatic motion in between the diatonic steps, we strengthen the tension, making the releases in the arpeggio much more soothing to the ear. Use of G-sharp and B-natural this early in the piece is not suggesting movement to keys such as a minor or C major. In contrast, the B-naturals in measures thirteen, fourteen, and the following measures are accompanied by harmonies that sequence through the circle of fifths, eventually landing firmly in tonicized C major.

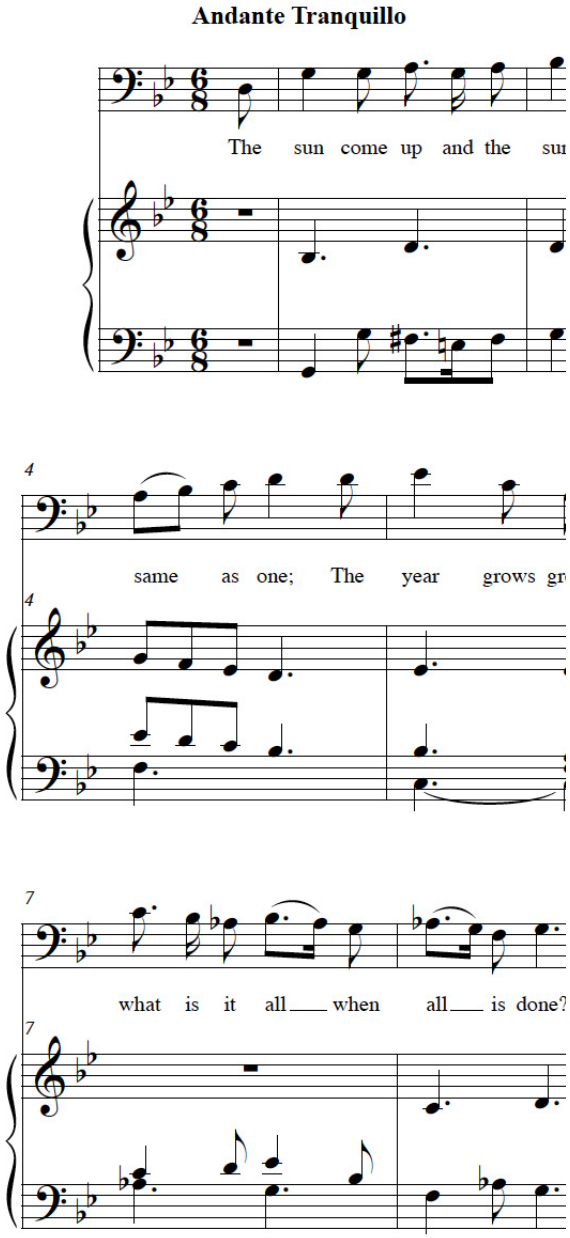
The B section has development-like tendencies. In this section, a short gesture seen in measures twenty-one through twenty-four (g minor) are repeated a fifth away in the following four measures (d minor), concluding this section with a sustained dominant pedal for seven measures. The D from the d minor carries through as an appoggiatura in the downward C dominant seventh arpeggios seen in the vocal line. The two four-bar phrases can be split into two thoughts: a rising scale figure and a double neighbor tone resolution. They each start with rising scale degrees 1, 2, and 3 and then move down into the double neighbor tone motion towards tonic.

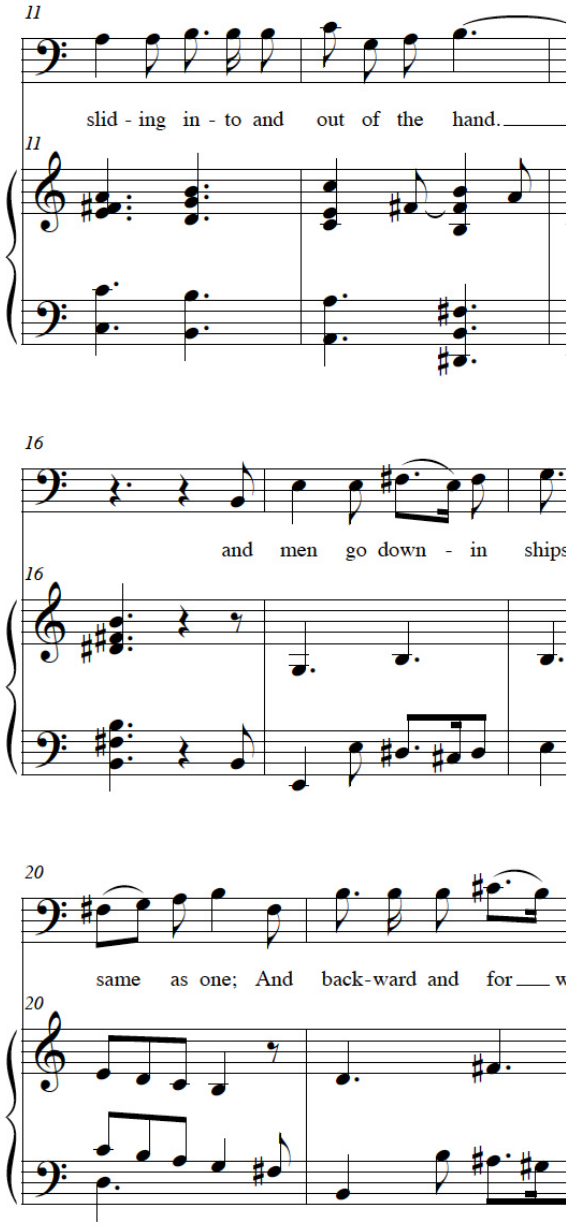
In the final A section, the biggest thing for the student to note is when the external phrase expansion starts to occur. This is defined by the point in which the piece could have ended tonally, but instead insists on continuing. This point in music affirms the final key of F major with repetitive I-V motion, which can be seen starting in measure forty-three. This is a good memory point for the student because it will require more thought about the melody fitting into a stagnant harmony. As a practice point, scales and arpeggios in F major could prepare the mind and fingers for these kinds of patterns. In measure forty-four, a D neighbor tone occurs, but could easily be incorporated into the practice regiment.

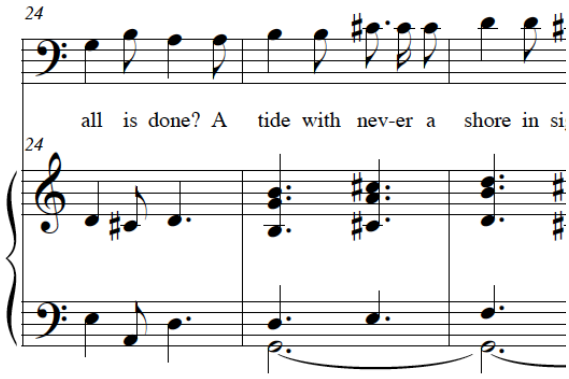
F major and C major scales and arpeggios

- Identification of non-chord tones with function
- Sequence identification with chordal analysis

Noth


Andante Tranquillo
The sun come up and the su
same as one; The year grows gr
what is it all ___ when all ___ is done?


11
slid - ing in - to and out of the hand.
11
16
and men go down - in ships
16
20
same as one; And back-ward and for w
20


24
all is done? A tide with nev-er a shore in si
24

The sun comes up and the sun goes down,
And the day and the night are the same as one;
The year grows green and the year grows brown
And what is it all, when all is done?

Grains of sombre or shining sand
Sliding into and out of the hand.
And men go down in ships to the sea
And a thousand ships are the same as one;

And backward and forward blows the breeze,
And what is it all, when all is done?
A tide with never a shore in sight,
Setting steadily on towards the night.

This excerpt from Clara Kathleen Rogers's "Nothing" is longer than most excerpts in this book. It can be taught at various points in the curriculum depending on how the student can process patterns. So much of memorization is based on pattern recognition. The same students who struggle with remembering their scales will probably also struggle with this excerpt, therefore requiring placing it later in the curriculum.

This brings up a larger issue: Why do some students excel at memorizing patterns and some do not? As discussed many other times earlier, the students who struggle are having issues identifying facets of patterns. As an example, a scale consists of a series of half steps and whole steps. When initially learning a major scale, it can be learned by letter name or the scale can be learned by steps between notes. The big difference between these ways of thinking comes down to the amount necessary to learn. When learning each note name in a scale, learning all major scales would require learning 96 different notes (12 scales x 8 notes). In contrast, a musician needs to learn 7 interval relations in a major scale.

In a similar vain, “Nothing” contains the same theme three times in three different keys: g minor, b minor, and e minor. As the student studies this excerpt, they should be able to identify the transpositions of the theme. Similar to practicing scales or arpeggios, the student should practice the theme in a variety of different keys, including keys that are not in this song. The interval patterns and scale degrees are the most valuable thing to remember.

It is also a critical skill to memorize patterns in a variety of keys in order to hear where the negative tendencies of the instrument influence musical decisions. As an example, F#3 on the bassoon is a naturally sharp and bright-sounding note. Without careful attention, this note easily sticks out of texture. In the key of b minor, a louder F# as scale degree 5 would not be as tragic and in the key of e minor, as scale degree 2. The student will be challenged to make each key sound fluid and effortless.

The form of this excerpt can be seen as ABA(partial)A. The A sections each start with our main motive, which can be seen from measures 1-4. The first A section has a consequent phrase that is accompanied by a circle of fifths harmonic sequence, allowing motion to distant keys when desired. In this case, the sequence is broken on beat two of measure seven. Instead of moving to a D-flat, the previous A-flat acts as a lowered scale degree six in the key of C minor. C minor is eluded in measure nine and instead resolves to C major, starting the B section.

The B section is the only point in the excerpt that uses a major mode: C major. The accompaniment’s texture calms down and helps create the *molto tranquillo* mood denoted. Longer lines are created by having a less active melodic line; more notes are repeated consecutively to simulate legato lines. This texture is quickly abandoned in measure thirteen, as

the transition into an A section occurs in the piano as the voice sustains. The held B in the vocal line acts as a dominant for our newly tonicized key of e minor.

The next two A sections state the main theme seen from measures one through four, with further elaboration in the second section. The second A section, seen starting in measure seventeen, acts as a dominant for the final A section, which starts with pickups into measure twenty-one. The previous section does not use the same circle of fifths sequencing seen in the opening. In the final section, a modified circle of fifths sequence can be seen starting in measure twenty-two. The coda to follow uses a pedal G (the last note in the sequence from previous measures) that leads to the final cadence to c minor, seen at the end of the excerpt.

As the student learns this excerpt, it will be important to remember the road map of the piece based on the sections. Not only does the student have to remember the melody, but will also have to remember the general key areas visited and how they are related to each other. The text was not translated or modified, so the student can follow the objects in the narrative as an addition mnemonic device.

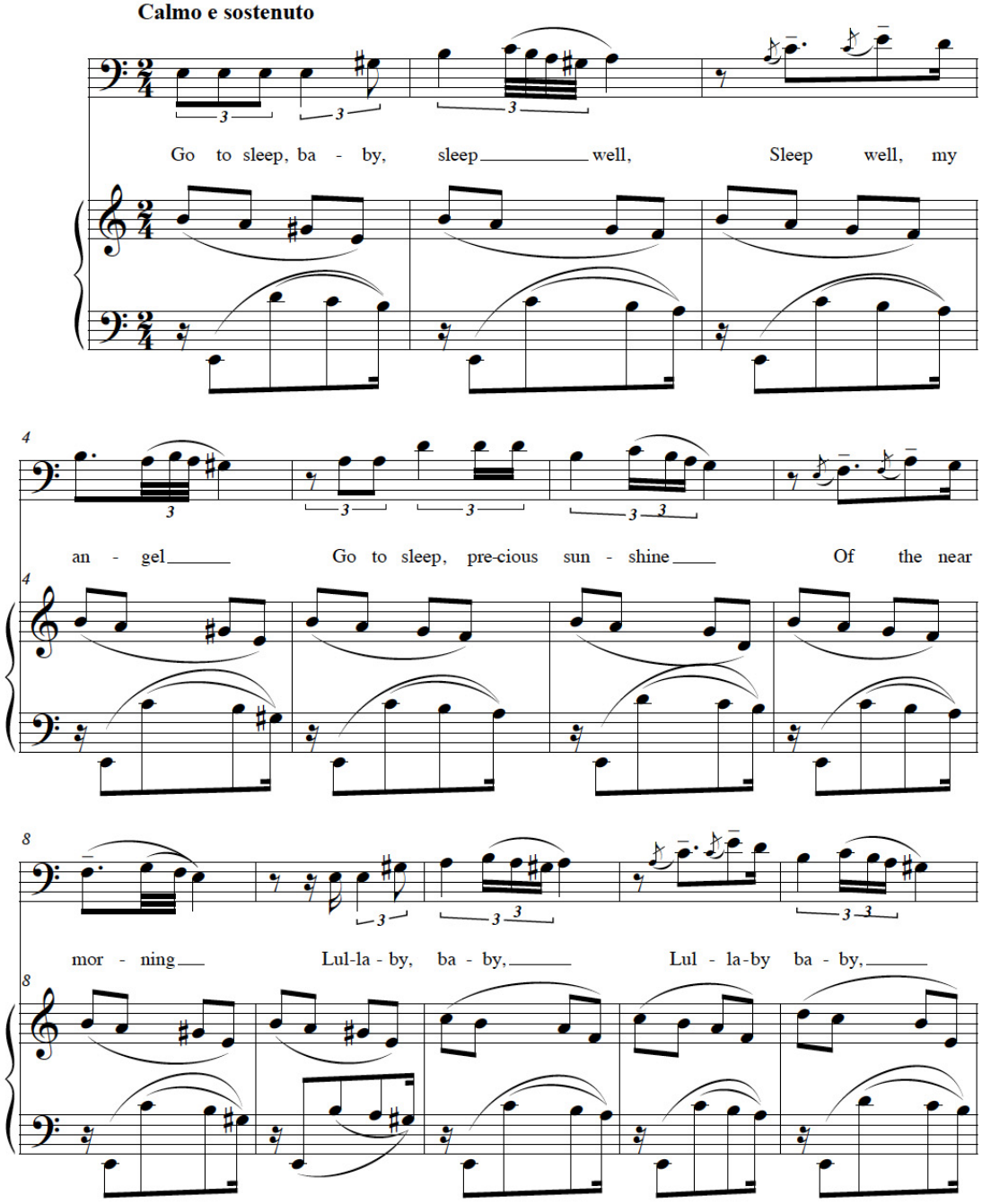
Skills necessary:

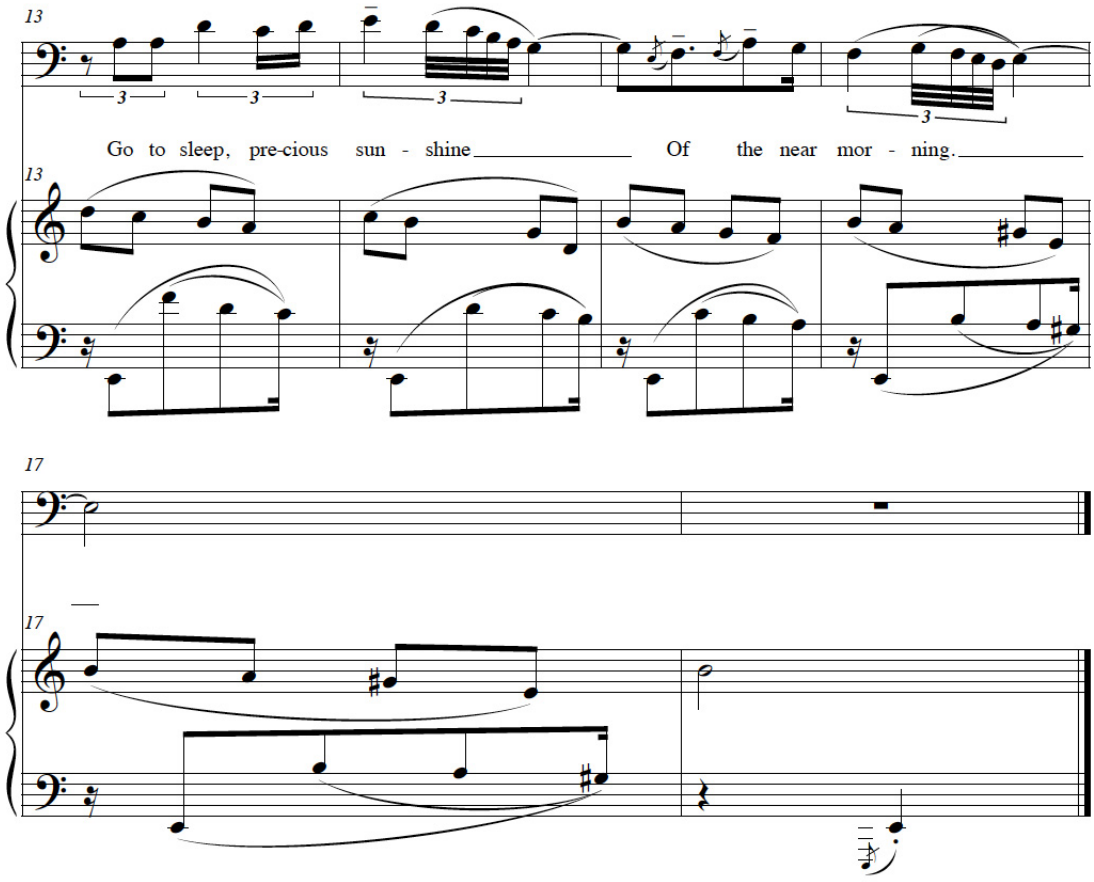
- Able to label a melody with scale degrees
- Key identification
- E minor, G minor, B minor, and C major scales
- Replication of patterns in multiple keys
- Sequences (circle of fifths)

Nana

Manuel de Falla

Calmo e sostenuto



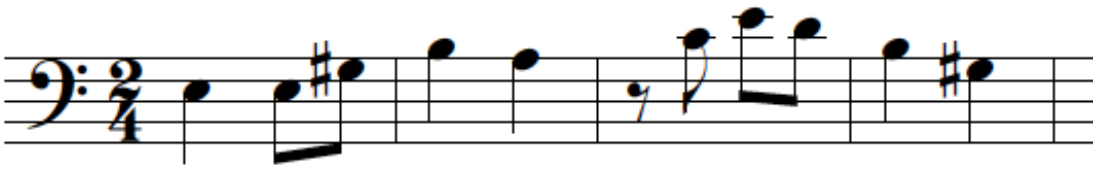

13
Go to sleep, pre-cious sun - shine Of the near mor - ning.
13
17
17

Duérmete, niño, duerme,	Go to sleep, baby, sleep well,
Duerme, mi alma,	Sleep well, my angel,
Duérmete, lucerito	Go to sleep, precious sunshine
De la mañana.	Of the near morning,
Nanita, nana,	Lullaby, baby,
Nanita, nana.	Lullaby, baby,
Duérmete, lucerito	Go to sleep, precious sunshine
De la mañana.	Of the near morning.

One of the greater difficulties in analyzing unfamiliar music is understanding which notes are structural and which notes are fundamental. This can become an issue, particularly in baroque music, but also seen in a variety of other time periods. "Nana", from *Siete Canciones Populares Españolas* by Manuel de Falla uses ornaments to show the natural flow of the voice and the freedom one can have while singing a simple folk song. The text from "Nana" is from a traditional lullaby from Spain. The performer should try to capture the gentle, flexible mood created with the ornaments written.

The challenge with memorizing "Nana" would be understanding the function of the ornaments in relation to the fundamental notes. The neighbor tones, double neighbor tones and grace notes muddle the simple line that can be seen. In addition, the duple versus triple juxtaposition adds to the organic feel of the piece; however, could potentially make a performer more rigid. If the performer feels constrained by subdivisions and counting, the mood of the piece may be ruined.

Before learning each note of the piece, the student should create a "skeleton". This does not need to be a Schenkerian graph, but should assist the student in creating longer lines before adding the embellishments back in. Below is an example of the of measures one through form as an outline:



When looking at the entire piece from the perspective, more note relationships come out and will stick with the performer. As an example, the parallel between the second and fourth measures show the antecedent/consequent relationship created by using A in measure two as a predominant and G-sharp in measure four towards tonic motion. After creating an outline of the entire piece, the student should go through and identify each type or ornament. It is important to identify the ornamentation's function in relation to the skeleton created earlier. As an example, the grace notes used in measures three, seven, eleven, and fifteen create more tension in the ascending line by using retardation. Often in this piece, the embellishments fill space between notes, allowing the singer to glide through intervals.

This soundscape that is created by the a harmonic minor on scale degree five/e phrygian with the raised third modes brings the listener to a far away land. As the student works and performs this piece, they should note the alternating modes and use those are memory benchmarks: Measures one through four are the a harmonic minor tone set with an E tonic, measures five through eight is e Phrygian, and continues alternating every four measures. When looking at each four measure, rhythmic patterns start to form. As an example, the third measure of each phrase has grace notes and similar interval relationships. The fourth measure always descends and has notes that fill the space in between the two main notes.

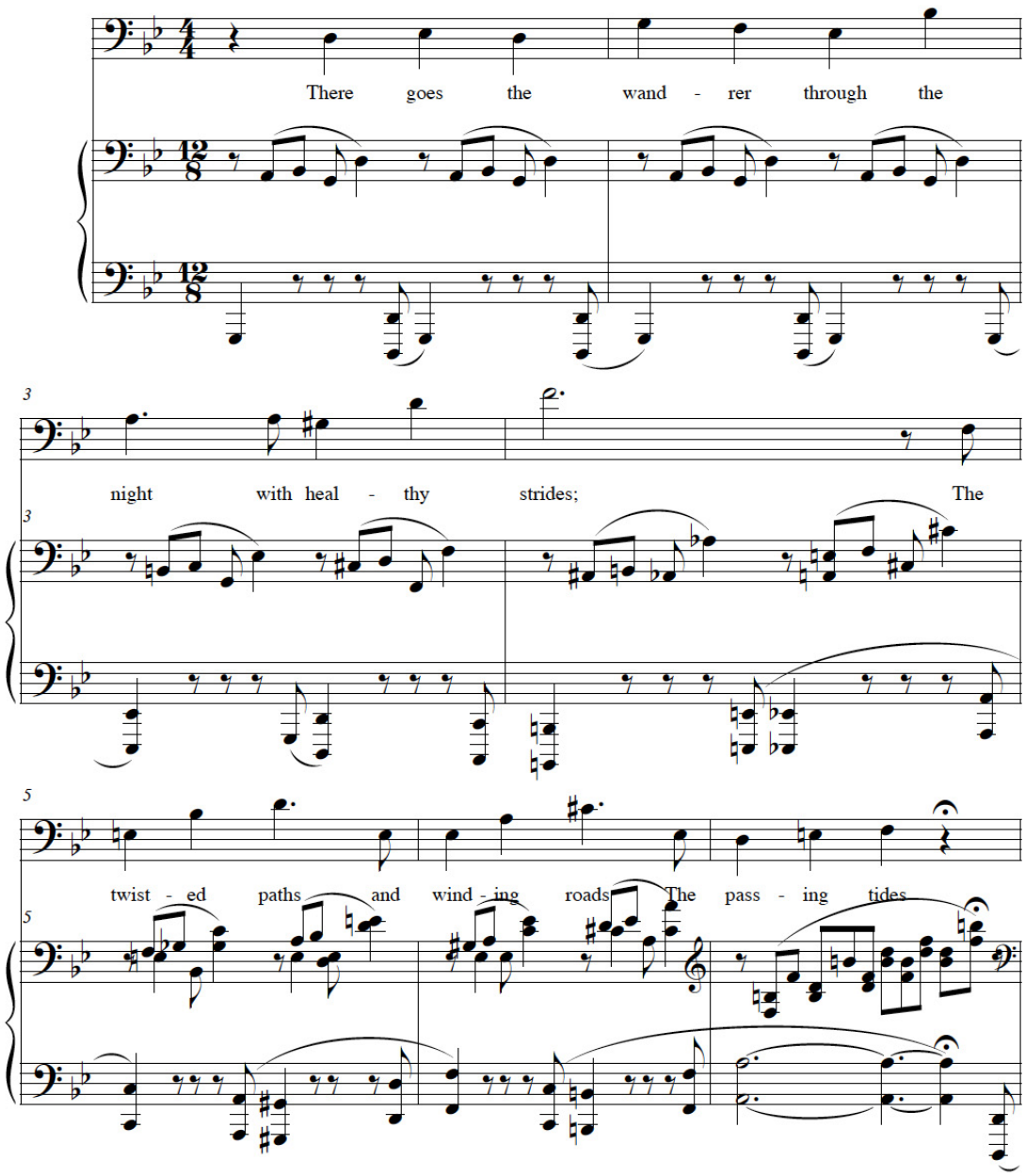
Skills necessary:

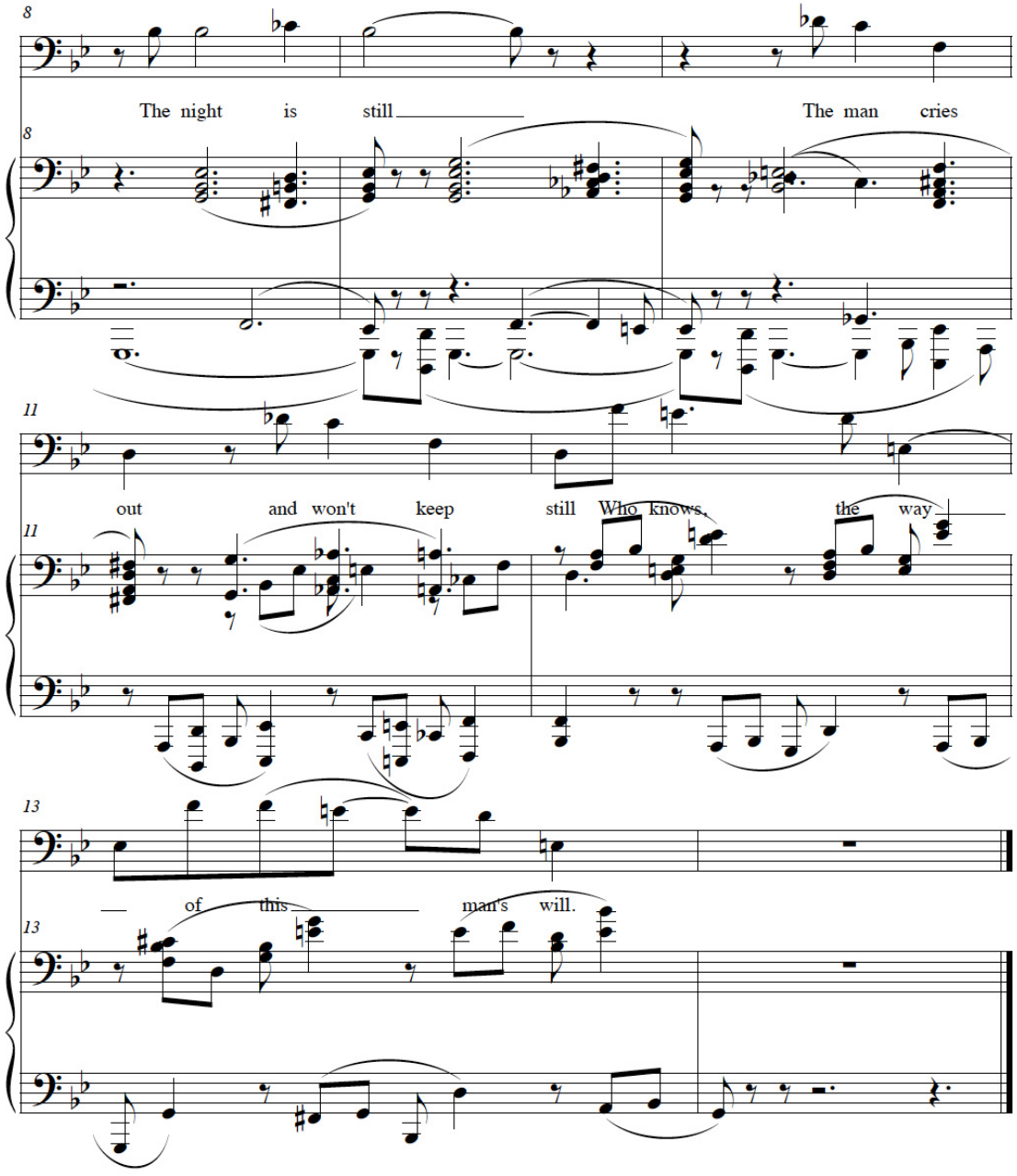
- a harmonic minor and e phrygian scales
- Create a melodic outline
- Ornamentation identification
- Ability to play duple and triple rhythms

Der Wanderer

Arnold Schoenberg

Mässig




8
The night is still The man cries
8
11
out and won't keep still Who knows, the way
11
13
of this man's will.
13

Es geht ein Wand'rer durch die Nacht	There goes the wand'rer through the night
Mit gutem Schritt;	with healthy strides;
Und krummes Tal und lange Höhn -	The twisted paths and winding roads -
Er nimmt sie mit.	the passing tides.
Die Nacht ist schön -	The night is still –
Er schreitet zu und steht nicht still,	The man cries out and won't keep still
Weiß nicht, wohin sein Weg noch will.	Who knows, the way of this man's will.

While working on Amy Beach's *Mine Be the Lips!* (Etude No. 15), the student was asked to think of tonal areas and clusters rather than each note being in reference to the key signature. The Beach excerpt is a precursor exercise to this excerpt, taken from Arnold Schoenberg's "Der Wanderer," from *8 Lieder, Op, 6*. This piece was written in 1905, before Schoenberg's dive into his notorious twelve-tone compositions. "Der Wanderer" is considered to still be part of Schoenberg's early tonal period[45].

This piece was selected because it has moments of tonality and patterns but strays away from traditional Western tonality. The bassoon has an immense amount of post-tonal repertoire, all of which needs to be approached in different ways. This etude book will not be able to address all of the post-tonal analytic techniques because some analysis is done ad hoc, depending on what is presented. Rhythmic and intervallic motives become the new way to work, both of which are introduced in this excerpt.

Before attempting to remember intervallic relations and making sense of this excerpt, have the student note any time music repeats itself. This could be a time for the student to make this into an arts and crafts project by color-coding similar areas. As an example, measures five and six would be the same color because it's the same rhythm, but measure six is transposed

[45] O.W. Neighbour, "Schoenberg, Arnold", Oxford University Press http://www.oxfordmusiconline.com/subscriber/article/grove/music/25024 (accessed January 8 2015).

down a half step. Similarly, measures ten and eleven belong together because it is material repeated twice in a row. The last repetition is in measure twelve and thirteen. There are rhythmic differences between the two measures but the notes are the same and played in the same order. Sections four and five could be different shades of the same color because of the intervals used in the gestures, which is explained in greater detail later. After identifying these repetitive moments, there is now less to memorize making this less than tonal piece more manageable.

This piece can be divided into five areas: measures one through four, measure five through seven, measures eight and nine, measures ten and eleven, and measure twelve and thirteen. The divisions are motivically based on the repetition discussed earlier and also by tonal groupings. The first grouping is very rooted in g minor and only starts to break away during beat three of measure three. Instead of moving from scale degrees 2 to 1 as one may assume, beat three is raised scale degree 1. Beats three, four, and one could be seen as a convoluted tonic-dominant-tonic relationship that did not quite make it to its respective notes.

Section two consists of one repeated gesture that is transposed down a half step in its second iteration. The notes used consist of a half diminished seventh chord while skipping the second note. This is a point in which relational tonal harmony will not have significance, so finding intervallic relationships is the key to remembering. The third chunk is very short and is more tonal than the previous part. The B-flat can be scale degree 3 in g minor again. The move to C-flat is just an enharmonic spelling on the B natural seen in the right hand of the piano.

The fourth and fifth chunks similarly repeat material and are intervallically related. The fifth gesture is transposed up a major third from the fourth gesture and lacks the third note in the sequence. These areas are subtly related to the second gesture, but moves in an opposite contour.

Additionally, instead of a half diminished seventh chord, these chords represent minor seventh chords that are led into by a half step from above.

One of the larger challenges with this kind of music is making sense of musical gestures without tonal inference. The drama in this music is really shown in wide interval leaps and the half step motions built into the repeated notes. It is of utmost importance that a student doesn't just memorize the notes but really creates aural interest in the performance.

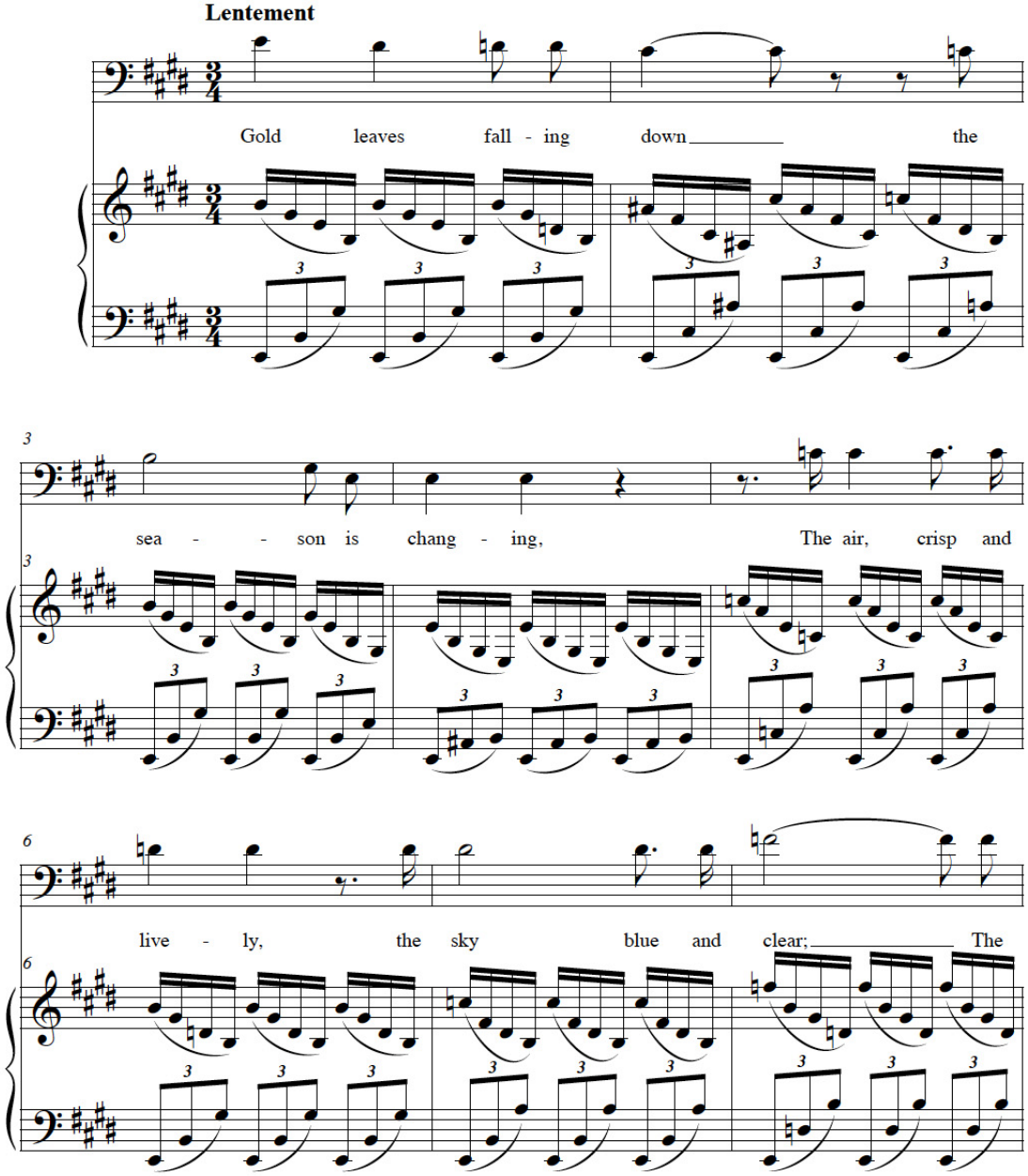
Skills necessary

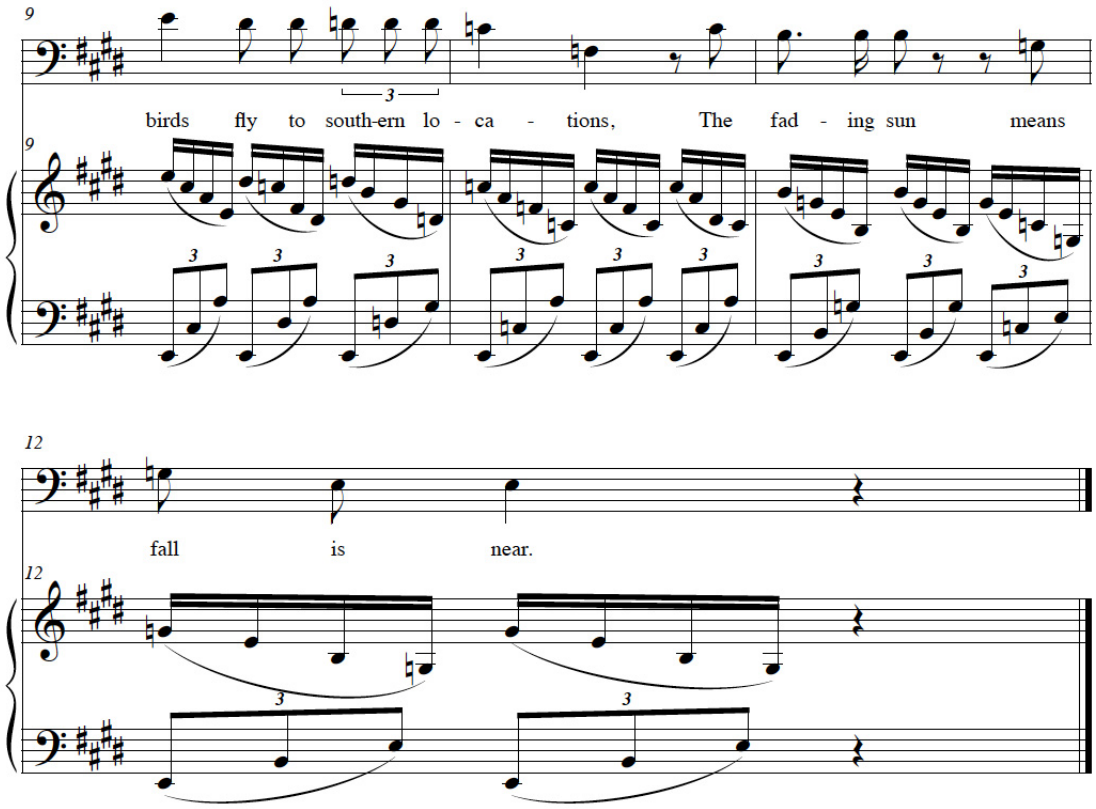
- g minor scales
- Seventh arpeggios
- Interval labeling
- Pattern recognition

Nanny

Ernest Chausson

Lentement




9
birds fly to south-ern lo - ca - tions, The fad - ing sun means
12
fall is near.

Bois chers aux ramiers, pleurez, doux feuillages,
Et toi, source vive, et vous, frais sentiers;
Pleurez, ô bruyères sauvages,
Buissons de houx et d'églantiers.

Gold leaves falling down, the season is changing,
The air, crisp and lively, the sky blue and clear;
The birds fly to southern locations,
The fading sun means fall is near.

This etude book emphasizes the importance of analyzing music within the confines of patterns already learned, such as scales and arpeggios. "Nanny", from *7 Mélodies, Op. 2* by Ernest Chausson fits perfectly into this pedagogical idea. Instead of the emphasis on major and minor scales, this excerpt will focus on chromatic movement. The key signature at the beginning of the excerpt is the key of E major and moves almost exclusively by half step, avoiding most "traditional" tonal implications.

The use of half steps in tonal music pull the listener toward foundations of tonality; the fourth moves down by half step to the third in major scales, the seventh moves towards to the tonic, and the lowered sixth from minor scales moves to the fifth. By using chromatic tones outside of the scale, it lessens the tension towards foundational notes. In this instance, it takes away from E major.

The excerpt present can be split into ABA form, each section being four measures long. When analyzing, the student will see that the A sections follow a stricter, chromatic descending line while the B section ascends, creating tension towards the tonic of E. In the A sections, each starts with E and descends for two measures by half step. On the downbeat of both the third measure and eleventh measure, the chromatic motion arrives on B, which is also scale degree five. Each A section resolves on the tonic of E, but in different ways. Measure three resolves down to E by means of an E major arpeggio while measures eleven and twelve resolve by an e minor

arpeggio. This shows the insignificance of the modality and emphasizes a strong sense of tonal center without the need of tonal pull.

The B section counteracts the tightly packed A section by both changing directions and expanding the intervals to whole steps. The harmonies move from E major in measure four to a minor, seen in measure five. The vocal line starts on C (scale degree flat six) and ascends presumably towards E as one would assume by means of D (scale degree flat seven) and D-sharp (scale degree seven). This section continues to defy what one may assume by evading resolution on E. Instead, the motion of the line surpasses E and goes to F (scale degree flat two). As the high point of the excerpt dynamically, the F acts as a leading tone to the return of the A section. Using both D-sharp and F act as a double leading tone, using both notes that are a half step away from our tonal center.

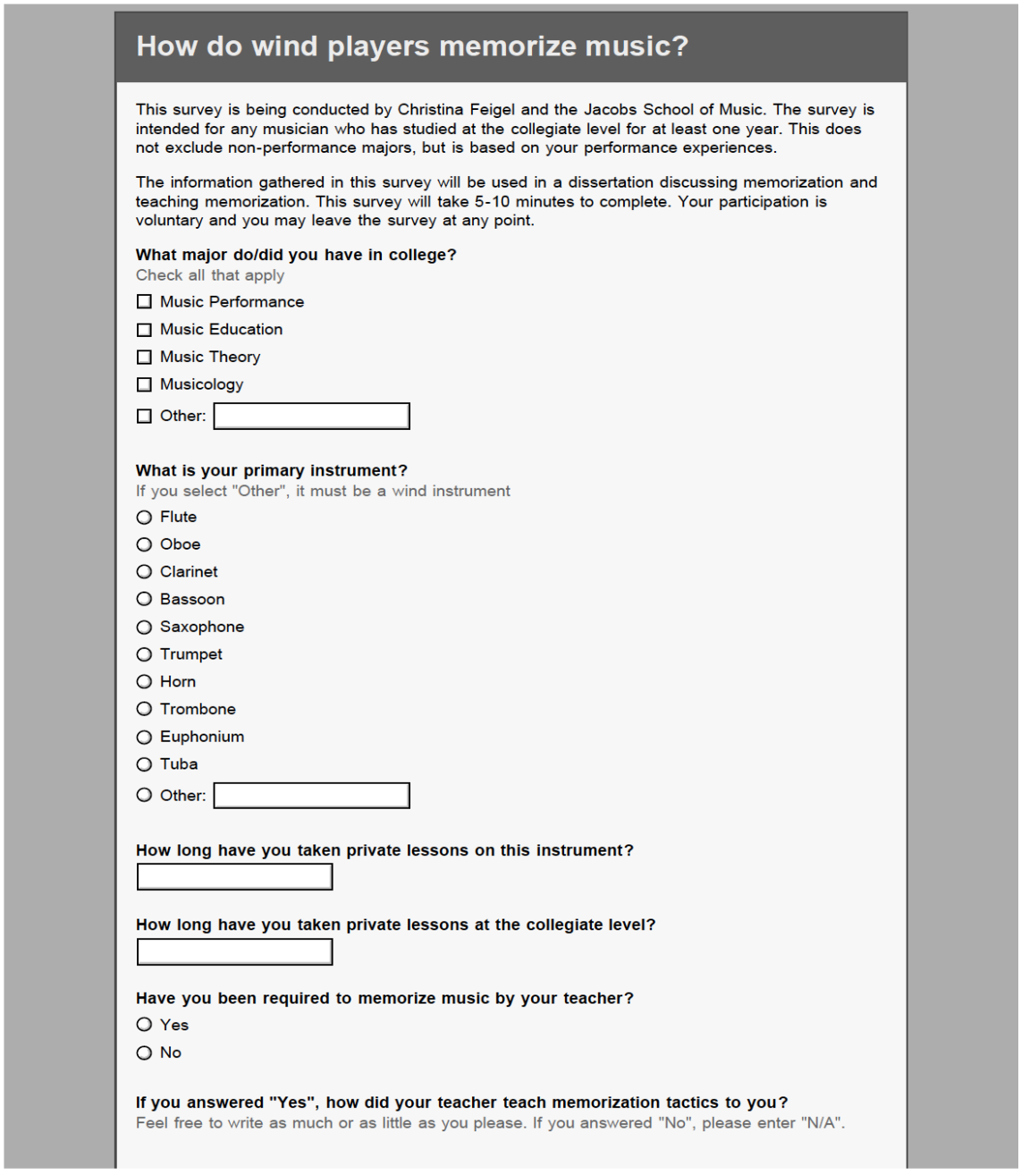
When the student practice this excerpt, it may be advantageous to practice it with a drone of the pitch E. This will help the student hear the consonances and dissonances that are woven into the chromatic texture. This is also a good representation of what it would be like to play with the accompaniment; a pedal E exists in the left hand throughout the entire excerpt. The student will also have to pay attention to when the chromatic patterns break away. The excerpt is a good chance to think beyond major and minor scales, which is more representative of post-tonal repertoire.

Skills necessary:

- Chromatic scales
- Able to identify major and minor arpeggios

Appendix A: Survey Results

How do wind players memorize music?



How do wind players memorize music?

This survey is being conducted by Christina Feigel and the Jacobs School of Music. The survey is intended for any musician who has studied at the collegiate level for at least one year. This does not exclude non-performance majors, but is based on your performance experiences.

The information gathered in this survey will be used in a dissertation discussing memorization and teaching memorization. This survey will take 5-10 minutes to complete. Your participation is voluntary and you may leave the survey at any point.

What major do/did you have in college?
Check all that apply

- ☐ Music Performance
- ☐ Music Education
- ☐ Music Theory
- ☐ Musicology
- ☐ Other:

What is your primary instrument?
If you select "Other", it must be a wind instrument

- ○ Flute
- ○ Oboe
- ○ Clarinet
- ○ Bassoon
- ○ Saxophone
- ○ Trumpet
- ○ Horn
- ○ Trombone
- ○ Euphonium
- ○ Tuba
- ○ Other:

How long have you taken private lessons on this instrument?

How long have you taken private lessons at the collegiate level?

Have you been required to memorize music by your teacher?

- ○ Yes
- ○ No

If you answered "Yes", how did your teacher teach memorization tactics to you?
Feel free to write as much or as little as you please. If you answered "No", please enter "N/A".

https://docs.google.com/forms/d/1z4d6LLJKgmd6JCT2VAeKvXTwSewjwDgyR_JwMm5QIY4/viewform[2/1/15 3:48:24 PM]

Regardless of requirement, what memorization tactics have worked best for you?
This may include things such as rote practice, analysis, listening to recordings, etc. If you have never memorized anything, please specify that below.

Did you start on a different instrument? If so, what type?

- ○ Not Applicable
- ○ Winds
- ○ Strings
- ○ Piano
- ○ Percussion
- ○ Voice
- ○ Other:

How long did you take lessons on your first instrument?
If you answered "Not Applicable" in the previous question, please enter "N/A".

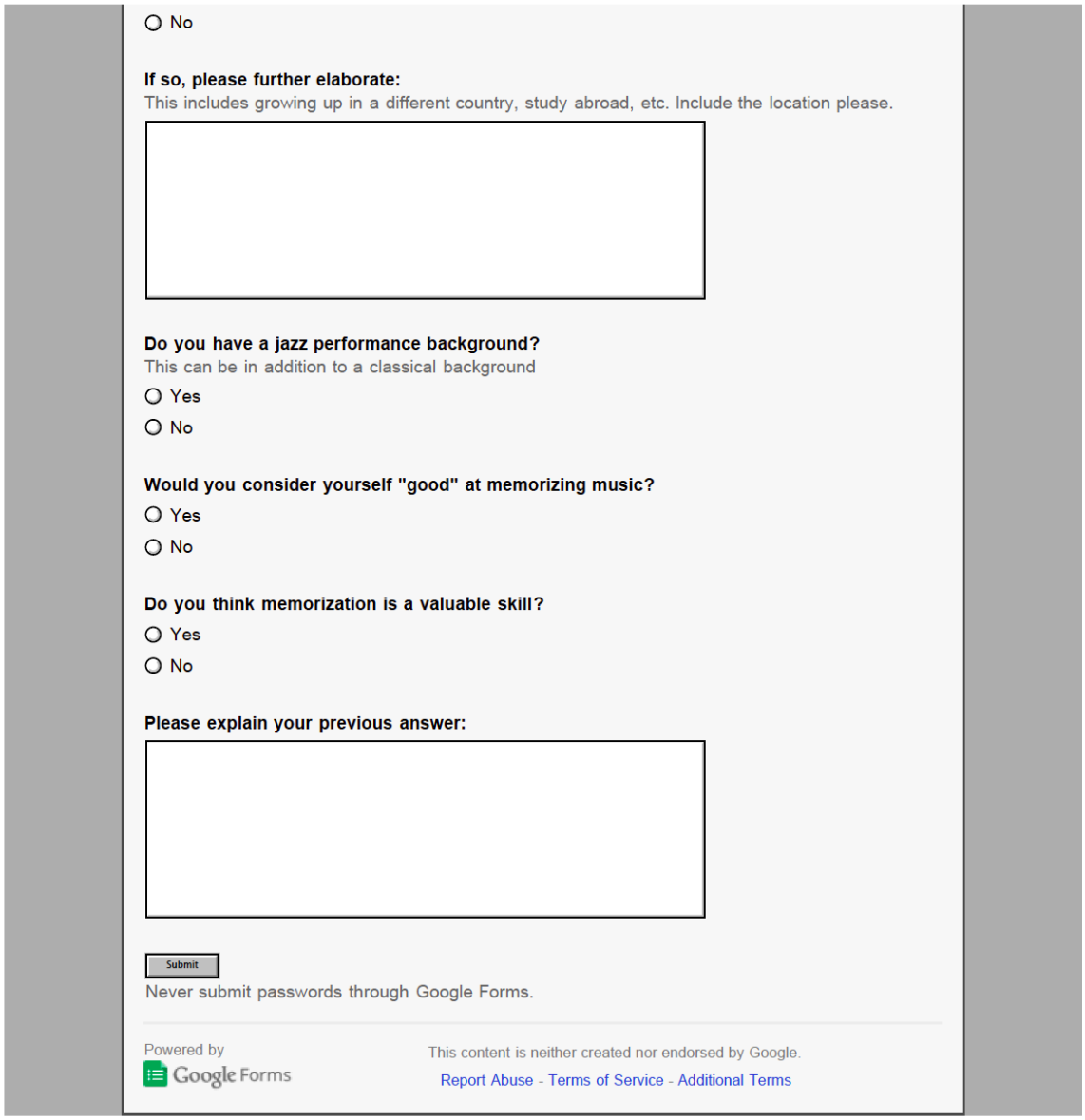
Did your teacher require you to memorize music?

- ○ Yes
- ○ No

If you answered "Yes", how did your teacher teach memorization tactics to you?
Feel free to write as much or as little as you please. If you answered "No", please enter "N/A".

Have you studied music somewhere other than the US?

- ○ Yes



○ No

If so, please further elaborate:
This includes growing up in a different country, study abroad, etc. Include the location please.

Do you have a jazz performance background?
This can be in addition to a classical background

○ Yes
○ No

Would you consider yourself "good" at memorizing music?

○ Yes
○ No

Do you think memorization is a valuable skill?

○ Yes
○ No

Please explain your previous answer:

Submit

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ID	6. If you answered "Yes", how did your teacher teach memorization tactics to you?
1	N/A
2	Mostly by listening and playing along with recordings at first. Using music sometimes, taking it away at other times.
3	My teacher never gave me tactics. I was simply told to memorize it.
4	
5	
6	My private teacher in high school had me memorize music for a concerto competition. He did not teach me any techniques. I memorize music by rote, in sections.
7	
8	Have never been taught memorization
9	
10	Play it slowly, a few bars at a time, repeat, adding more bars a few at a time.
11	Work in small chunks and add to the known material. Listen to recordings.
12	
13	Emphasis on repetition (both small-scale and large-scale) and analysis
14	Tactics weren't taught; it was left to me.
15	N/A
16	Listening memory, muscle memory, repetition, pattern recognition memory ie: scales, chords, augmentation, diminution, key change repeated melody, etc.
17	Told to play and play and play with the score. Then so small chunks without the score.
18	I had to memorize a concerto for a performance with an orchestra. I practiced memorization by learning small sections at a time and gradually stringing them together
19	"chunking" - start with small sections, don't continue until you can get it right always. listen to a recording over and over and over again. Lock in mentally, thinking about fingers, breath, and feel (if repertoire) if technical exercises, pattern is key. memorize the pattern aurally and physically.
20	

ID	6. If you answered "Yes", how did your teacher teach memorization tactics to you?
21	We went through a variety of techniques as the weeks progressed. Mostly, he relied on me to grab onto the techniques that worked the best for me but showed me several, including - -Simple repetition: First with music, then without. At various tempi. -Mental practice: Singing the work through in your head. First with the score, then without. Especially helpful before you go to sleep. -Backwards memorization: Starting at the end of the piece or section and slowly working backwards, note-by-note, so you were always playing towards something you knew. -Turning: As odd as this may sound, turning in a circle (slowly and carefully) as you play a passage. -Big repetition: For larger works, repeating the entire work 3 times. -Memorized woodshedding: Using woodshedding techniques on a technical passage without music. -Writing the piece out from memory: Including dynamics, tempi, articulations, etc. -Listening to recordings
22	The teacher said, simply: "Memorize this."
23	N/A
24	I did not receive much advise. Typically my teachers would tell me to go phrase by phrase and look for sections that repeated.
25	
26	My teacher was largely hands off, but encouraged me to come to each lesson with a new phrase or section memorized.
27	
28	N/A
29	
30	
31	N/A
32	

ID	6. If you answered "Yes", how did your teacher teach memorization tactics to you?
33	Chunk the music and play through sections over and over again. Record yourself. Listen to recordings of yourself and professionals. Walk around reviewing it even if instrument is not in front of you.
34	No techniques were taught. I was just expected to memorize over the course of the semester.
35	Dividing it into sections; working backwards so that you're always moving towards known territory, listening to the piece, understanding the harmonic movement
36	
37	N/A
38	
39	
40	I was actually taught memorization techniques by my secondary piano teacher, not my primary instrument teacher. She had me do the following techniques: 1. Divide the music in to sections (either at the phrase level or musical character level. It was my choice.) 2. Associate each section with a number and memorize each small section. 3. I was required to play any section from the beginning in any order she called out. This helped if you got lost in the music because you had milestones to jump to. 4. She also had me play each section from memory excruciatingly slow...like eighth-note equals 50 or 60. This avoided relying on muscle memory and truly knowing the notes that came next. I also learned from a friend to start backwards. Memorize the last measure first and add from there. Then, everything is always familiar as you move through the music. Most students start from the beginning so by the time they get to the third movement of the concerto, the first movement is cake and the third movement is scary...
41	I didn't learn memorization tactics.
42	No, learned through repetition mostly.
43	N/A
44	N/A
45	Repetition. Interval memorization, rather than just notes.
46	
47	Memorized a phrase at a time
48	I was only taught tactics when I expressed concern with memorization. My teacher suggested notating the music from memory to add a visual element to the process. I independently tried to solfege/analyze the music theoretically to help, as well.
49	Find scales/arpeggios and other patterns, then use repetition in non-pattern sections. Start at the end and work back to the beginning.
50	

ID	6. If you answered "Yes", how did your teacher teach memorization tactics to you?
51	For intense pieces, memorize body movements that make sense phrase-wise along with the notes. They'll end up working together. In general, just to memorize things one phrase at a time and slowly string them together. It helps to work on parts of the piece that are thematically similar at the same time, even if they're not right next to each other.
52	N/A
53	N/A
54	N/A
55	N/a
56	Listening to recordings, singing, looking at the score making sure that I knew every inch of the piece, breaking down phrases and repetition.
57	N/A
58	Basically play small chunks with music, look away and try to play the same small chunk. Repeat until successful.
59	Knowing the key and common scales in that key. Going through and understanding the chordal structure. Putting chordal structures together to make sentences or phrases. Then putting sentences or phrases together into full sections. Analysis of form as well.
60	My undergraduate teacher had me memorize melodic etudes each week but not many tactics were given, as it was not usually much of an issue. They were rather simple technically. I had a summer festival teacher strongly encourage me to memorize for the concerto competition and suggested that I practice sections of it memorized. Based on my experience with the piece, she assumed I knew it memorized once I forced myself to, which was true.
61	My teachers focused on getting the piece performance-ready with music, then, breaking it into small chunks to memorize. They also gave me opportunities to perform parts of the piece memorized in low-pressure situations (studio classes, etc.) to get used to how it would feel to play from memory with an audience.
62	Teacher didn't teach memorization
63	Play the piece over and over until it is committed to muscle memory
64	
65	N/A
66	I played the piece over and over until I felt like I had a handle on it and then turned the stand around, turning it back for reference. My teacher pointed out that truly knowing a piece of music almost implies having it memorized. The amount of practice necessary to "master" a piece is more the the time it takes to memorize it.
67	I was just told to play it through a lot until I learned it from memory
68	N/A
69	Play along to recordings; memorize small snippets and add on each side.
70	
71	N/A

ID	6. If you answered "Yes", how did your teacher teach memorization tactics to you?
72	-writing out what you are trying to memorize -singing/saying note names of melodies -playing memorized parts at half tempo -memorizing chunks at a time -complete mental run-throughs
73	N/a
74	I was never taught memorization tactics.
75	One thing that worked well for me is that after memorizing the whole thing, the teacher would expect me to start playing from any point in the piece... we would start at seemingly random sections and I'd be expected to be able to pick up without much difficulty. Marching Band and choral music was more memorization by pure repetition.
76	I haven't really had much of a problem with memorizing, so I haven't heard much from teachers about it. One thing I remember a teacher tell me is to analyze the chord progressions and memorize those. Others have advocated rote practice.
77	Take things one phrase at a time. Play it with the music, then turn your stand around and play it as best you can without. Carry this technique through the entire piece you are studying.
78	Start from the end! Then practice 10 measures at a time.
79	N/A
80	Find patterns, section off into chunks, sing then play ("If you can sing it, you can play it"), repetition, listen to recordings, play along with recordings or SmartMusic
81	One small phrase at a time.
82	To work on repetition and association. Engaged practicing helps memorization and work efforts.
83	bar by bar, phrase by phrase, chunking practice
84	My horn lessons didn't discuss memorization much. I didn't really have a problem doing it. I also took secondary piano during undergrad, and my teacher there had a system. We divided the piece into small sections (4-8 bars) and I had to play each section in a variety of ways (on top of the keys with no sound, one hand playing and the other on top of the keys, extremely slowly) and play the sections in any order. If I ever had trouble on horn, I used these tactics.
85	N/A
86	N/A
87	My teachers didn't not help me figure out any tactics, which is why I had trouble really memorizing music until I was a DMA student. Even then, it was difficult.
88	Teacher did not offer tactics, but required students to memorize audition music.
89	Always work backwards through challenging passages, so that in performance you're always moving towards more familiar material.
90	Taught me a concerto by memory; copied teacher--"call and response" style

ID	6. If you answered "Yes", how did your teacher teach memorization tactics to you?
91	She never taught me any tactics to memorize music, she just asked me to memorize it, and I was able to, so we never talked about methods.
92	
93	Solfege or singing the music memorising chunk by chunk looking for patterns (Sonata form, key centres, etc)
94	Playing along with a recording Memorizing chord progressions Memorization through repetition
95	Practicing with the music a lot. Memorizing bits or a page at a time.
96	
97	He didn't, but I've always relied on muscle memory and repeatedly listening to recordings of whatever I'm trying to memorize.
98	
99	Not much...usually short etudes, scales, and playing phrases back after hearing them. Also, asking me to play a piece by memory without having practiced memorizing it--she said this was to show me how much I had put into muscle memory without realizing.
100	Listen to recordings a lot, know all accompaniment, sing it, write it out
101	N/a
102	
103	
104	N\a
105	It was for high school contests and it was a little over ten years ago. She recommended learning phrase by phrase in short chunks. I think she suggested singing it before hand, or, at least, being aware of the general contour of the melody line. There was also accidental memorization from playing it frequently for lessons.
106	With the instrument, without the instrument, with different levels of consciousness, and with different focal points.
107	
108	Memorization required depending on circumstances of performance.
109	To focus on intervals first and then focus on rhythm. To force yourself to attempt to play it without looking even before you've played thorough it a hundred times. To focus on the sensation/muscle memory and experience as opposed to thinking of the written notes in your mind.
110	N/A
111	teacher gave no tactics, only to practice a lot and not look at the music
112	N/A
113	Listening was encouraged, but memorization was not a huge part of my study, to be honest. I don't think it's emphasized enough in the brass world.
114	
115	Repetition and finding patterns

ID	6. If you answered "Yes", how did your teacher teach memorization tactics to you?
116	He didn't. He just told me to have etudes memorized by next week
117	N/A
118	My teacher did not really teach tactics to me - he maybe mentioned trying to memorize in musical sections, but for the most part I took care of it on my own.
119	I have a photographic memory, so memorizing notated music has been simple for me. I have a relatively good aural memory, but it takes me a bit longer to memorize things that I don't see notated.
120	He recommended visualization - going through the whole piece visualizing the fingerings.
121	n/a
122	No guidance
123	Repetition repetition repetition
124	Not taught to do it at all
125	Didn't really get much specific help...mostly just repetition.
126	My professor taught me no tactics, said to just do it.
127	N/A
128	Wasn't really taught - just sort of "do it" I guess.
129	Listening to the recording over and over again, memorizing tone progression through listening rather than note progression by reading
130	Singing my part, picturing the music in my head, writing it out, doing theoretical analyses for form
131	Just to play the piece over and over until I "have it in my fingers"
132	
133	Teachers have just suggested repetition and slow practice, as well as visualization and finding what works best for me personally.
134	Analyze the form/harmony
135	Mostly just phrase by phrase repetition.
136	
137	
138	
139	I don't think any did, they just asked me to do it.
140	N/A
141	N/A
142	My high school and college band directors required us to memorize all field music. I do not recall any specific tactics being discussed beyond "take it little by little" and "start early." Surely, there was more to it, but this was a long time ago.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
1	I've never had to memorize for lessons, but I have for a solo competition. The pieces were Osborne Rhapsody, Faure Elegie, and Telemann F minor Sonata. I combined analysis with rote practice to accomplish memorization, I would divide the piece into sections and memorize the sections independently then work to string them together. I'd pay particular attention to the transitions and also to repeated or near repeated material to ensure I wouldn't get lost in the form. I also listened to the music quite a bit, sometimes with and sometimes without a score. I took music that I knew very well from a recital and then practicing it as above had it memorized in a couple months. I took my time with it but I also didn't have any memory issues in competition.
2	Listening and becoming very familiar with it. Once I know it in and out, memorization isn't difficult. Analysis helps as well.
3	Theory analysis - knowing the underlying harmony. Finding patterns within the excerpt or piece helps. Memorizing in "chunks" (beats, measures, phrases)
4	I studied piano before bassoon and had to memorize for that. Rote practice was how I memorized music usually. With bassoon I have never been required to memorize, so when I have it has been an inadvertent byproduct of rote practice. A couple of super catchy things/super famous things (Weber Concerto) I have learned at least partially by ear before ever even looking at music.
5	Sing a lot
6	rote practice, working in sections.
7	Analysis Playing in my head while doing other things Rote practice (Fortunately I have a good aural memory)
8	Playing along with recordings, working a section at a time.
9	When trying to memorize music, rote practice is all that seems to work for me.
10	Listening to recordings (and reading along with my part), plus the "play it slowly, a few bars at a time" thing I mentioned earlier.
11	Listening to recordings. Lots of repetition until muscle memory kicks in.
12	Rote practice. Playing along to recordings. Playing forward and backwards. Practice rhythms.
13	- repetition and rote practice - analysis There have also been times that I've memorized things without trying--usually following careful, detailed practicing over a long period of time.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
14	Repetition Listening to recordings Writing out the part Playing on a different instrument (piano)
15	Learn to sing it. Even if you don't think you have it memorized, TRY IT MEMORIZED. You can't swim if you don't jump in.
16	Listenting, pattern recognition
17	Small chunks. Lots of listening.
18	
19	recordings and pattern recognition
20	Constant practice and enjoying the music enough to want to perform exactly how the composer wanted it.
21	The three that worked the best for me were simple repetition, backwards memorization, and memorized woodshedding.
22	Rote practice, starting at the beginning of the piece with a short passage.....then adding another short passage (and then re-playing beginning at the beginning). Continually add another short passage and then re-practice from the beginning until you hit the end! An additional approach was to spend time with the paper music.....just reading it and becoming familiar with the notes and the page. While playing from memory....I could picture the page.
23	I have perfect pitch, so memorization has always come pretty easily. I find that a combination of the following three things helps me to memorize: listening to recordings, sitting quietly with the music and imagining how it goes in my head, and practicing. I have rarely tried to memorize music purposefully; it always just seems to happen over the course of practicing. I find that in preparing for orchestra auditions, I naturally end up memorizing all the excerpts, even though I had no clear intention of doing so.
24	I find using the chord structure of the piece helps break the piece into manageable portions. In addition singing along with a recording helped in grain the solo line, which usually made remembering and therefore memorizing the melody easier.
25	Repeating small sections, theoretical analysis, audiating
26	I found that knowing the chord progressions and larger functions of each melody was helpful. Also I used piano cues rather than counting long rests.
27	I usually memorize music by committing an "aural picture" to memory. I consider myself to have a strong ear (perfect pitch) and can create this aural picture after only a couple of readings or listenings. I am able to connect this aural picture to actual performance, much like a jazz musician may improvise (though I am doing this with prepared music). Sometimes I find it more beneficial to memorize music tactilely (i.e. technical or rhythmically challenging passages), and this will require slow, rote practice. Unfortunately, I seem to be very bad at memorizing song lyrics!
28	I prefer to start with small sections and add them together. Separate phrases first. Also finding patterns and repetition helps greatly.
29	Finding the patterns. Analyze the chord changes.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
30	Rote practice
31	I learn a phrase at a time and add phrases gradually.
32	None. Never was required to memorize. Practicing excerpts over and over led to their memorization, but that was not the goal. Would never NOT use music.
33	All listed above.
34	Mainly rote practice after having learned the piece fully from the music.
35	Listening to and understanding the piece on many different levels, i.e. the harmonic motions, the emotional projection or narrative. Muscle memory in the fingers for technique. Alternating practicing with and without the music, and in general looking out for traps where you might get confused, and taking special care to not fall into them.
36	I've never memorized anything for performance. I have accidentally memorized stuff, and I think that comes from multiple listenings to recordings and rote, conscious practice.
37	Mental practice: score study, singing, playing on piano, drilling sections with only fingers, analysis of harmony and form, noticing patterns and repeated material, being familiar with the piano or orchestra part, etc.
38	Breaking the piece into big chunks and playing those chucks out of order playing through the entire piece every night with the music before I pack up writing out my part from memory
39	Simple practice. I didn't put in any extra time to memorize. It just simply happened through lots of practice. Muscle memory?
40	Using the section method and being able to play the sections in order, out of order, and backwards has helped. Playing the music very very slow works well, but it is very boring of course, so I find myself reluctant to use that technique. I just recently learned about the backwards method and have not had the chance to try it out, but I love the concept!
41	Get a feel for the song under my fingers. Be able to sing the tune of the song independently of playing or reading. Practice section by section and build on. Muscle memory muscle memory muscle memory.
42	Rote, recordings
43	Rote practice, listening to recordings.
44	Contextual listening - memorizing the accompanying parts as well as my own; analysis (remembering harmonies and sequences)
45	Repetition. Memorization has always come easy to me.
46	
47	Memorized a phrase at a time; lots of repetition
48	The analysis helped a good deal, particularly when I paired it with singing. At times, practicing in front of a mirror to actually see my fingers move seemed to help.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
49	Starting at the end and working forward worked well as muscle memory was already built up in the early sections from the initial learning process before memorization. Being able to sing the line (as much as vocal agility allows) was something else that helped when it became too tiring to physically play.
50	
51	Lots of practicing things over and over and over. Playing with recordings helps too.
52	analysis and rote practice for muscle memory
53	Listening, and repetition.
54	Listening to recordings is a must for me. Most of my memorization on my wind instrument comes through rote practice, but sometimes I focus on intervals between phrases, as memorizing phrases in isolation sometimes seems to be easier than memorizing how to connect them, especially when the interval is great, pitch-wise. Within phrases, it also seems natural to learn chunks of notes or gestures (literally, sort of, since patterns of arrangements of fingers on keyed woodwind instruments can be pretty distinct) rather than a series of notes.
55	Repetition. I would play 4-8 measures at a time, alternating looking and not looking at the music. If I got it with no mistakes, then I'd go on to the next phrase. Then put phrases together. Also helped if I knew the form of the piece and could remember what comes next.
56	Listening and singing has been the most beneficial.
57	Listening to recordings and repetition in practice
58	The aforementioned one, as well as just score study and listening/fingering along.
59	Analysis was the biggest focal point and seemed to work most for me. We were discouraged from just listening to recordings until after a mastery of the piece was achieved.
60	Knowing the piece really well audibly and repetition over time has worked best for me. When walking around or driving, I finger and play myself through a piece (a suggestion by my mother, a pianist)
61	Setting definite memorization goals in advance for each day was very helpful. Even if the goal was just to memorize a few more measures, it kept my nerves at bay, because I always knew whether I was on track or not.
62	Repetitions (lots!!) After awhile it sticks Trying to play it by ear (helps multiple areas at once) Getting into the mental state of knowing that I have to memorize what I'm playing
63	what has worked best for me is to know the piece so well that I can write it down from memory and being able to play it backwards
64	I rarely memorize, but when I do, it is from playing a little at a time and adding more once I get some of it memorized.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
65	Spending more time playing without any sheet music to learn which notes are associated with which fingerings. Having increased familiarity with which sounds to expect from which actions, and once I know how the piece of music itself sounds, I am able to just recall the melody itself, and "let" my muscle memory and note/hand associations take care of the rest.
66	Repetition and practice.
67	Analysis to find big-picture patterns and differentiate repetitions, playing through a lot, listening to recordings
68	When I've had to memorize, I: play the first subphrase 10 times while looking at the music, then immediately play it 10 times without looking. play the second subphrase 10 times looking, then play 1st and 2nd subphrases without looking. play subphrase 3 looking, play 2+3 not looking, etc etc etc.
69	Surrounding myself with the music- listening, practicing, singing through, studying scores.
70	
71	I've found repetition can be just about the worst thing one can do for memorizing music. Practicing things through dry repetition ensures the performance will be dull and emotionless. Especially for memorizing difficult technical passages, I will always revert to slow practice. Not only does this help me polish the passage, but I learn the notes in the process. If one can understand the music they are playing slowly (or perhaps in a faster context as well) they will memorize much more easily. Listening to recordings is also a very helpful tool. This helps one learn the piece of music as a whole and not just the notes in your part. Getting to know your solo line in the context of the accompaniment is very important when memorizing music.
72	-playing memorized at slower tempos -lots of mental run throughs -saying note names aloud -fingering through the piece
73	Repetition, listening to recordings
74	Frequently, rote practice was fairly effective, though at times it wasn't effective in getting the "entire" piece memorized as it was hard to link up all the little fragments I had memorized. At times, memorization just seemed more a matter of time... that if I knew the piece well enough it just would be memorized by then.
75	I've always been able to memorize music best by listening to it. Then, the tune and all of its underlying chord progressions get stuck in my head and I start singing it. Since I play the horn, I'd even mimic the valve combinations when I didn't have the instrument with me. Then, after playing it a few times, I can play from memory.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
76	Memorizing a "road map" of the piece helps me most. I memorize the broadest form first, then fill it in with groups of measures. In particularly difficult-to-memorize sections, I break it down further to individual measures and even notes. I usually make this one of my first steps in learning a piece.
77	I must be able to sing the piece in order to play it correctly by memory. Any passages that I cannot sing aloud correctly, I usually cannot play them correctly by memory. I have also found that if I am able to finger through the piece without my instrument in hand, I am more successful at performing it from memory.
78	(see above)
79	Just listening to different recordings, playing along with them, and looking at a score
80	Repetition, sectioning off smaller chunks, listening to it and knowing it in my head so I can sing it, playing along with recordings or SmartMusic
81	Repetition of the small phrases and then putting them together.
82	Practice, repetition, and feeling it in my fingers - motor memory.
83	singing the parts, rote memorization bar by bar listening analyzing the score moving to the music/physical large muscle memory
84	The tactics listed above. Also, lots of listening to a piece and rote practice. I usually had played a piece long enough before trying to play by memory that I knew the music very well and just had to add finger memory to it.
85	Generally rote practice worked best for me, especially looking at small sections at a time.
86	rote practice
87	What worked best was lots of repetitive practice, as I would normally do anyway. I realized that if I took the music away as I did the repetitions and added more music bit by bit, I could memorize it gradually. Listening to recordings is helpful, but it's the rote practice that really helped me.
88	Solfege. My fingers know scales and passages, but for extended passages of music, I really need to know every single note name. This contrasts with my experience on piano and harpsichord where understanding the form and simply being able to play the piece is most of the work in memorization on those instruments.
89	I try to approach memorizing a piece from as many different directions in addition to rote practice as possible - I study the score, listen to recordings, visualize performances without a recording, etc. I don't need to have totally analyzed and memorized the complete score, but I want to be familiar enough with the piece to have formed an opinion about my musical function at any given point. To memorize individual passages I practice them with my eyes closed the same way I would practice them with music - slowly at first isolating small groups and intervals, and gradually expanding to include the complete passage. I open my eyes to check the notes as often as needed but always play looking away from the music.
90	Rote, recordings

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
91	I have never "tried" to memorize anything, I am just fortunate that I have the ability to memorize whatever I am playing as I play through it. For me, it's a combination of (a) if I can hear the melody, and I know what note it starts on, I can play it. It's also (b) an association between the physical fingering of the note and the pitch that is produced, coming from years of practice. The two are intertwined to the point where as I practice, I feel the fingerings involved and hear the sounds produced, and together that information results in the music being memorized. The other thing that helps is that I have a mental image of what the music looks like in my head, so I can reference this as well. However, this is less important, as I can still memorize music without having seen the sheet music.
92	recordings, remembering key areas, playing individual passages thoughtfully.
93	Solfege works great. I also have a semi-photographic memory so I try to "see" the music in my head.
94	Repetition works best for me
95	Playing the piece a lot so that I have the melody in my head. Then I memorize theory aspects (what key is this part in, is this passage an elaborate arpeggio, etc) so that when I do it from memory, I'm focusing on muscle memory.
96	Memorizing the melody, and my fingers figure out which notes to play. Many, many repetitions. Knowing the underlying harmony is important as well.
97	See above.
98	I memorize by playing a small section with music and then trying to play it without music. I repeat until I can play the small section confidently. After learning enough small sections I put them all together and repeat until I can play the larger section seamlessly.
99	Visualizing the written music works best for me, and when I'm not playing, using imagery to play through it in my head. Then, playing it at different tempi, in different styles--playing around with it. Playing it on a different instrument or singing it, and finally, chunking by memory, so that each memorized section is one small chunk that exist as a whole thing in itself. So I either remember the whole chunk or not. First, also understanding the structure--analysis.
100	Rote practice and singing
101	I have a photographic memory. I only need to see or hear something a couple times and it's memorized. I usually memorize a piece after the first couple days of learning it and cease practicing with the score a couple weeks before a concerto performance.
102	repetition, visualization (of printed music), listening
103	-Repetition -slow practicing while pressing valves a bit harder than usual -listening
104	Rote practice worked the best for me. By becoming more and more familiar with the piece, i started memorizing sections of it until i knew it completely

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
105	I haven't had to memorize anything in ten years. My fingers are pretty solid at muscle memory. Rote practice, or the depth of detail that "normal" practicing requires to work on a piece usually results in some small chunks memorized primarily in my fingers. Visual learner here, so seeing the part/score in my head helps. Once I can see the beginning of the next phrase (or piano cues during a rest) in my mind's eye, I feel more confident. It's usually best for the very beginning of the piece, but not as much further along. Analysis of scale/arpeggio patterns helps me learn a piece and string along chunks or phrases as opposed to thinking note-by-note. Listening to recordings helps a bit, especially when combining with other instruments. Thinking purely about the phrase that I'm presently playing helps me not get distracted or confused while memorizing. Kinda like seeing each tree distinctly in the forest as you walk through it.
106	Mentally going through every note, in a photographic sense and in a kinesthetic sense (finger motion without an instrument). Repetative listenings. Determining the phrasing of the music and what each section means or feels like kinesthetically and emotionally together.
107	Rote practice, singing/solfege the part
108	Repition and positive reinforcement. Visualization exercises away from instrument.
109	Focusing on intervals first. Practicing slowly- but if every detail in and then forcing myself out of my comfort zone by trying to play if from memory before having looked at the piece for very long- little chunks at a time of course.
110	Repetition. Phrase by phrase (play with music, then turn stand around and play same passage). Singing and "fingering" without playing, with printed music. Singing along with the recording, without printed music.
111	singing the piece with note names, analysis, rote practice
112	Making an colorful, aleatoric map of the music really helps me visualize the sections to remember them!
113	Identifying patterns so as to carve the music into bigger chunks. Looking for scalar patterns, rhythmic patterns, melodic sequences. That, and listening to the piece over and over. And over.
114	Listening. Working on small sections. I've memorized music naturally through practice without the specific intent.
115	I really haven't found one/any
116	
117	Played it so many times with music then practiced without music. Just used my ears.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
118	I listen to a piece in order get the form firmly in my head, and then I spend time in the practice room working through it. Usually during the "working through" phase, I memorize a large portion of the score without really concentrating on memorization. When approaching a performance, I spend more time listening to recordings to make sure the overarching form is really solid in my head, and I also do more full runs of the piece, both with music and without music.
119	Analysis is helpful.
120	One things that really helped me was starting right away to practice without the music and forcing myself to figure out unmemorized passages without looking at the music.
121	Playing small sections over and over without the music, then slowly playing bigger and bigger chunks until I can play the entire thing without any music. I tend to memorize the motions and think of how to move my fingers instead of visualizing the written music in my head.
122	Audiation, memorizing smaller pieces, analyzing structure and harmony, listening
123	Analysis Repetition Listening Repeat
124	Index cards - writing small chunks of a piece on cards and mixing them up and having to start from memory right from where the card starts. Also, listening through a piece and fingering along (mental practice)
125	Work on small parts at a time (with repetition) and then connect the smaller parts together...knowing the piece by ear (well enough to sing it)...Taking note of transitions.
126	Playing things over and over again. A few bars memorized, the start the next few bars. Memorize them separately and then put them together.
127	Rote
128	I label my parts with numbers based on musical phrasing and draw numbers from a hat. I'll play through the excerpt that corresponds with the number that I've drawn and repeat the cycle over and over. Eventually, in about two or three days, I will be able to start anywhere. This helps me play through the entire piece in question memorized.
129	Listening to recordings, memorizing phrase by phrase
130	Singing the lines, repetition, repetition, repetition. Also "feeling the finger movements" from note to note. I had difficulty with reliability.
131	Playing along with a recording Analysis Memorizing the piece in small parts Trying to visualize the score Sing the music while naming the notes
132	Rote practice, recordings, practicing passages while varying the rhythms and then playing the music normally again
133	I like to memorize by important sections, play with recordings, and visualize away from the instrument both with and without recordings.
134	Ear & finger memory

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
135	Listening to recordings helps a lot, especially with jazz and pop.
136	In doing a few concerto performances memorized, usually I've memorized the piece as a by-product of the preparation necessary to perform it. So, repetition essentially. Chunking sections helps as a final preparation the week of the performance, but the memorization is primarily during the process of learning the piece.
137	-Analysis -Imaginary playing along with a recording -Regular practice from memory
138	I usually memorize pieces automatically while practicing them. The way I picture their structure in my head is as small segments or ideas. I know what comes before or after every idea. If an idea comes back later in the piece, I remember the differences between the first time it comes and the second time. I have a more vague idea of the larger-scale structure of the piece. If I want to know the general structure better, I need to spend more time thinking about it.
139	I would play as much as I could not looking at the music or just close my eyes or turn around so i couldn't see it. When I wasn't sure what came next, I would peek at the music. Sometimes even when I was practicing with music in front of me I would just pay attention to how it sounds as I was playing it and somehow I'd remember it.
140	Playing from memory as much as possible during practice sessions, especially when working on technical passages. Singing the phrase before playing it. If I can't sing it, then my ear doesn't know it!
141	listen to recording while: focusing on transitions, fingering instrument, no instrument but moving fingers, naming notes. mentally (or actually) singing through while: focusing on transitions, fingering instrument, fingering without instrument, naming notes. Perform it! I think performing can interrupt the flow/calm you need to keep when memorizing. I always tried to stay calm and present while memorizing. Don't answer the phone, don't stop what you're doing. Finish exactly what you set out to finish.

ID	7. Regardless of requirement, what memorization tactics have worked best for you?
142	I start by looking at the entire piece to understand its structure. This is most important for me so that I can remember what order the piece is in at the end. At the same time, I also identify any repeated passages and especially technical sections. Before working on true memorization, I begin by rehearsing the technical challenges to get those out of the way. Then, I generally work from the end of the piece to the front. I memorize the last phrase by repetition. Then I memorize the second-to-last phrase. Then I memorize those two phrases together. Then I add each previous phrase. This reinforces the end of the work, which gives me increasing confidence in performance as the music progresses. The exception to the start-from-the-end approach is if there are notable repeated passages. I'll start by memorizing each repeated passage (using the start-from-the-end approach if they are lengthy) before learning the bridge material.

ID	11. If you answered "Yes", how did your teacher teach memorization tactics to you?
1	N/A
2	Na
3	N/A
4	I was not given tactics. I was simply told to memorize it. Which meant playing it over and over and over and over and over. In college (1 year of piano) my teacher discussed: 1. Playing the piece backwards measure by measure, adding the preceding measure each time, 2. Without listening to any recordings or sight reading the piece first, study the entire score long enough that you can see it in your head BEFORE attempting to play it. Thus memorizing it and being able to play it perfectly instantly (didn't work for me), 3. When memorizing, mark certain points in the score with an "X" so that if you lose your way in performance you only have to go forward or backward to the next X instead of having to completely start over. 4. Instead of memorizing the entire thing at once memorize anywhere from one line to one page at a time, repeating it until it is firmly in memory. THEN move on to the next section to be memorized.
5	
6	n/a
7	

ID	11. If you answered "Yes", how did your teacher teach memorization tactics to you?
8	Again was never taught to memorize but I always found that I was able to memorize on the piano without any kind of special tactics - it just came naturally.
9	
10	
11	N/A
12	N/A
13	
14	
15	
16	Same as above
17	N/A
18	
19	na
20	Constant practice, loving the music, and having a goal date to memorize it by, which was usually a festival or contest.
21	For voice, yes. Not for oboe. As I didn't study voice it was simply left up to the student to memorize the materials for choir and/or musicals. I recall it being a lot of repetition.
22	He did not. He said, simply: "memorize this".
23	N/A
24	As a young student my teacher relied primarily on rote practice for memorization.
25	Rote practicing, learning by ear
26	N/A
27	
28	N/a
29	
30	Repetition, covering music, doing it in chunks
31	N/A
32	Piano was not at the collegiate level, it was as a kid starting at age 5. My teacher simply told me to play the pieces over and over until I remembered them. No 'tactics'.
33	
34	Already answered this question for my first/primary instrument.
35	N/A
36	

ID	11. If you answered "Yes", how did your teacher teach memorization tactics to you?
37	Mental practice: score study, singing, analysis of harmony and form, noticing patterns and repeated material Ability to play the entire piece from memory with only your left or only your right hand. If contrapuntal, be able to play each voice independently. Memory games that create a safety net: 1. "Jump" - Divide the piece into logical chunks of 8-16 bars each. Start playing the piece, and have a friend (or record yourself) randomly say "jump," which means you have to jump to the beginning of a nearby chunk. That way if you lose your place in performance, you can easily jump to a spot that's close by. 2. "Freeze" - Start playing the piece, and have a friend randomly say "freeze" - you stop playing with your hands frozen. Then after a few seconds, they'll say "go," and you resume exactly where you left off. This helps discourage reliance on muscle memory. 3. LH/RH out/in - Start playing the piece, and have a friend randomly say "left hand out" or "right hand out." You continue playing but put that hand in your lap. When your friend says "left/right hand in," you add the hand back in as soon as you can, all while keeping the tempo. That way if only one hand forgets what it's doing, your other hand can keep going and you can eventually add the forgetful hand back in.
38	
39	
40	N/A
41	
42	Repetition through practice.
43	
44	Same as above, in addition to rote practicing and mere repetitions
45	N/A
46	
47	
48	No tactics were offered, just the assignment of "memorize."
49	
50	
51	
52	Motive by motive rote practice, then incorporating several into a phrase, then by sections. Effectively also covers analysis through the process.
53	N/A

ID	11. If you answered "Yes", how did your teacher teach memorization tactics to you?
54	My piano teacher did not teach me memorization techniques apart from rote, passive memorization from practicing and occasionally surprising me by taking away my music at lessons. Memorization for piano felt very muscle-memory-based, and, having studied piano when I was relatively young, I didn't have a great sense of what was going on musically. My fingers would know where the piece was going more often than my mind or ears would.
55	Same way - small chunks, phrases, then sections
56	
57	N/A
58	N/A
59	N/A
60	I did not take many formal piano lessons but played on my own for a long period of time, playing for National Federation of Music festival adjudication. My mother was a music educator and pianist and said she had a teacher suggest the visualization and fingerings while walking around, as I mentioned above.
61	N/A
62	N/A
63	play the piece over and over until it is committed to muscle memory
64	
65	N/A
66	as previously stated.
67	I learned with Suzuki so I memorized everything since I was a baby. I don't really know how I did it.
68	N/A
69	
70	
71	N/A
72	I memorized simply by playing the music until I knew it without looking at the page. At this point I think most of it was muscle memory. Learning to memorize at a young age, even if not on my primary instrument, was critical to being able to memorize as an adult.
73	Play a few bars multiple times, attempt them without looking until you have it, repeat with next few bars, out them together
74	
75	NA
76	Mostly rote practice.
77	N/A
78	Lots of run throughs.
79	N/A
80	N/A
81	Listening to recordings.

ID	11. If you answered "Yes", how did your teacher teach memorization tactics to you?
82	na
83	listening/repetition
84	I mostly listed these above in the first section. My pre-college teachers didn't really require memorization.
85	N/A
86	N/A
87	n/a (I was 5-10 yrs old when I played piano)
88	N/A
89	
90	
91	My teacher did not try to teach me any memorization tactics, because I never had a problem memorizing music. With piano, especially because it was at an earlier stage in my development, I memorized more by muscle memory that resulted from repetition of the repertoire.
92	
93	N/A
94	Memorization by repetition
95	N/A
96	One hand at a time, sometimes. Learn short segments, then gradually add a few more bars at a time.
97	N/A
98	I don't remember. I think I picked it up more naturally and didn't have to work very hard to memorize.
99	N/A
100	Rote practice, working in small sections from the end of the piece back
101	
102	
103	
104	N/a
105	N/A
106	
107	
108	Repition
109	N/A
110	Do not remember... Might have just taken the music away and forced me to try without it!
111	Yes, repetition in small chunks, being able to sing the piece, being able to write the piece down without looking at the music, being able to play it from memory while reading a magazine, being able to sing the fingerings, listening to recordings. chord analysis
112	N/A

ID	11. If you answered "Yes", how did your teacher teach memorization tactics to you?
113	Also sang in a boys' choir in elementary/middle school, and we memorized pieces in that ensemble.
114	
115	N/A
116	
117	
118	
119	
120	N/A
121	I don't really remember my teacher doing anything specific, I just remember it being easier to memorize on piano because I could watch my hands and remember what to play that way. It seems that memorization is a very physical and visual act for me.
122	N/A
123	
124	N/A
125	N/A
126	None
127	Teachers didn't specify technique
128	
129	N/A
130	If I had played it enough, I just watched my hands and new what came next. It came pretty easily.
131	N/A
132	
133	N/A
134	In small sections
135	N/A. I wish she had emphasized memorization and playing by ear more!
136	
137	-Memory in sections (memorizing the exposition one week, development the next, etc.) -Alternating using music and playing from memory
138	She teacher told me to memorize a few different starting points in Bach fugues in order to have a place to jump to in case I got lost.
139	
140	She didn't really describe memorization techniques... Usually by the point I was expected to have memorized the piece, I had played it enough times that I had memorized it without really trying. If I had continued piano lessons, this method might not have continued to work, since pieces were getting much longer and more complicated.
141	

ID	11. If you answered "Yes", how did your teacher teach memorization tactics to you?
142	I first studied piano in elementary school. Although I know I performed memorized music, I do not recall being taught how to do this. In a separate note, as this survey is targeted to wind instruments, I listed clarinet and alto sax as my primary instrument. In reality, I consider handbells my primary instrument, with clarinet, sax, trombone, and guitar as my secondary instruments. As a handbell musician, I play the entire range of notes by myself as a soloist. As the handbells take up quite a bit of space, it simply isn't practical to read from music in performance. Therefore, I must memorize all of my performance music using the basic memorization tactics I first used on wind instruments. When I've conducted handbell ensembles of 7-13 musicians where each musician handles just 3-5 chromatic notes out of the 5 octave range, I have found that the memorize-by-phrase, starting with the last phrase, can also work for the team. At first, there is a great deal of dubiousness from the individual players, but they quickly find they can learn long passages as a group. Throughout, I also reinforce that they need to be actively listening to one another and memorize their own notes within context of the group rather than as an independent exercise for each individual. I suspect this "group think" is even more critical than when individual members of a band memorize because a handbell ensemble is more like 13 people playing a single piano than 13 people in a wind ensemble.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
1	I find when I perform from memory I'm freer to listen to myself and whomever else I'm playing with which leads to more expressive phrasing. Also in the context of a performance -particularly with an orchestra- or a competition it creates a better stage presence which certainly doesn't help. Plus no page turns. I feel the main reason I don't do it more often is the stigma of wind players not playing from memory. If I do play from memory it would be unusual for my audience and if there was an issue because of it, I feel it would seem like a lapse in judgement more so than it would for a pianist or string player.
2	Memorization helps to become more familiar with the music. It gets you off of the page and more into the performance.
3	Memorization allows me to better internalize the music. It allows me focus not on the notes but on other aspects of the music (phrasing, musicality, ensemble playing). It also keeps me calmer. If I have the music memorized, I am less or maybe even not at all nervous.
4	Memorization allows me to focus more intently on expressing nuances and subtleties in the music that, relying on the crutch of the music on the stand, I would normally overlook. Because I am too busy making sure that I am actually playing the right notes.
5	The music will be more natural
6	It can help understand the music, as well as being required in some competitions.
7	
8	I find the music stand a communication barrier between performer and audience, and try to get rid of it wherever possible. I never used to do this on the flute but was inspired by another performer who demonstrated just how effective that kind of performance could be.
9	I think memorization can help take playing to the next level. If music is memorized there is never that moment where you are 'surprised' by what comes next.
10	It makes expression easier - not worrying about whether you're going to hit the right note in the right spot or not.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
11	If you can get to the point where something is completely memorized and you don't have to worry about notes anymore, there is a lot more room for expressive music making. I tend to second guess myself and prefer not to perform from memory even though I know the value of it. The anxiety it causes outweighs the benefits for me even though I wish it didn't. I think that people with a marching band background tend to memorize easier and have less anxiety about it. I have no marching band background.
12	As a teacher, requiring memorization is an effective way to get students to practice for consistent mastery. Students often, at least at my school, do not practice enough to perform a scale or excerpt consistently. They practice enough that they can play it moderately well but not consistently, and they think that this is close enough to consider "knowing" it. Requiring memorization forces students to dedicate more time to the excerpt to meet the parameters of the assignment, thus raising their fundamental skill level.
13	It requires a higher level of awareness and engagement with the music, and forces the performer to internalize the music in a particular way.
14	For music majors those aspiring, memorization is crucial. Major concertos should be memorized, at the very least. Having major excerpts memorized and ready to perform (even if not at the highest level) is an important skill, and very valuable as a performer and a teacher. Even at the basic level, music students should have their scales, arpeggios, chords, key signatures, etc. memorized to be a functional musician. The skill doesn't apply just to literature. I'm not up on the psychology and neurological studies of memorization and its effects on musicians (and humans in general), but I suspect that it's a skill that positively affects music, and areas outside of it, as well.
15	You will be more into the music. You're playing will be immediately better once you stop relying on a piece of paper to tell what to do next. You can focus on other things.
16	Allows for more freedom of expression- not being tied to the page (either by self or conductor)
17	Allows for more original and meaningful interpretation of the music.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
18	i think that memorization can only benefit performance, wether the final performance is played by memory or by reading memorization of a piece helps develop a more personal understanding of the music and can also increase confidence during a performance.
19	it's more personal for yourself and others if music is memorize. If I can just whip something out, it feels good to play it. If i need music, it feels more formal and academic (but can still lead to very nice moments and performances)
20	Sometimes you can get lost in the music, either by simply losing your place on the page or most likely by getting lost in the beautiful sounds that are combining around you. I think it makes it easier to listen across the room and help match the band/orchestra in nuances that make the music sound that much more beautiful. It drives me crazy when each player focusing on their music only and does not try to blend in with the rest of the group. The connection between parts makes all the difference.
21	Even if one is not comfortable with performing from memory, the process of memorization helps you learn the piece in and out. For me, it was also a musically freeing experience. Not in the sense that I didn't memorize the dynamics, articulations, musical terms. But I without looking and focusing so hard on the sheet music, everything was engrained in the playing and I could focus on expanding my musical range.
22	Any complex exercise for the brain must be beneficial to brain health. Musically....memorization allows the performer to make the music his own....a part of him. The performance comes from the heart.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
23	Do you have a jazz performance background? Yes, I studied saxophone from fifth through eleventh grade. During junior high, I participated in jazz band three times per week. We were required to learn how to improvise our own solos. Oftentimes, I would listen to the local jazz radio station and soak up what I heard. I would also transcribe solos from recordings just to see what the performer was actually playing. I think this definitely helped my ability to memorize. Would you consider yourself "good" at memorizing music? Yes. Memorization has never been an issue for me and I have always found it to be very liberating to perform without music. I often practice audition excerpts/solos without the music in front of me. Do you think memorization is a valuable skill? Yes, absolutely. Once a piece is memorized, it is easier to focus on the bigger picture and other aspects of the music, such as phrasing, articulation, sound. The more that the notes and rhythms are ingrained into your head, the more you are able to focus on making music and taking risks and creating something beautiful.
24	I don't think memorization is a useless skill. To me the point of memorization is to become familiar and comfortable with a piece. If we have studied and know a piece well enough, memorization happens automatically. I have not found memorization useful in my teaching or playing career. If anything memorization can help increase familiarity, but in an artificial manner. It is only when a piece has been studied and understood that the performer is able to truly perform the piece. Memorization is a natural effect of intense study of one piece of music.
25	I don't think I'm "good" or "bad", just out of practice. I wish that my collegiate level training had required me to memorize more. I took an audition class that required the memorization of excerpts and found that I played them much better afterward because I was focused on responding to my ears instead of what I was reading
26	Performing free of sheet music allows you to focus wholly on the other aspects of performing, and requires a deeper knowledge of the piece than reading.
27	
28	I don't notice any performance benefit to memorization. If music is readily available, I see no reason to require it.
29	Memorization of the music allows you to be more expressive.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
30	Do we expect people to memorize books? No...because we value the ability to read and comprehend. Memorizing allows you to be off the page but at performance time very often you are flexible with being off page a bit even if not memorized...it allows you to communicate with other musicians and not be tied to the page. Less page turning and having a stand in front of you and the audience.
31	I believe that memorization helps to free you for deeper interpretation.
32	I understand the idea in memorization is to 'free' you from the page. I would rather concentrate on playing musically without the added stress of memorization. I do think it differs, though. For voice and piano, maybe it is better to memorize. For ww, brass, strings not so important. Obviously in piano, page turns are a huge distraction and with voice it leaves you free to emote more, nothing to hold in your hands. I think it should be a personal choice.
33	I think it helps learning pieces. I even consider finger memory a type of memorization.
34	Medieval people memorized entire books of prose and music, while today's culture doesn't even memorize phone numbers anymore because of the ease of getting information through technology. Our brains are dying without it.
35	I don't really like performing without music, but I recognize that it's more engaging for the audience when a player isn't hiding behind a stand.
36	I think memorization would free musicians up for further expression and communication with other musicians and audiences.
37	The main benefit of memorization is that it forces you to mentally learn a piece better. The more you understand the piece, the more likely it is that you can present a convincing, musical interpretation. Memorization is required for certain competitions, so it's a good skill to have if that's something you're interested in. Also, memorization often allows performers to connect with their audiences and colleagues without the barrier of a music stand, through increased eye contact and body language.
38	I think it will greatly improve my overall performance of memorized and non-memorized music, because it takes your mind off of the notes and forces you to be more musical and more expressive.
39	I don't believe that memorization is required to play the music to the best of your ability. Of course, it's a tool that allows more communication in chamber music, but I still believe that you should have the music out for reference, just in case! :)

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
40	I have recently been preparing a concerto and memorizing it. I have found that memorization makes it much easier to be musical. If I go back to the music and start reading, I actually feel restricted for some reason. There is so much more that isn't on the page that comes out when a performer has memorized the piece. It has motivated me to want to memorize more pieces and excerpts!
41	I think it's good to be able to memorize anything. Memorizing music is a more complex and potentially creative task because then you can focus on style and playing around with dynamics and tone, etc... but that might just be the jazz in me coming out.
42	Memorizing forces you to internalize the notes and allows you to be freer musically.
43	To me performing music is translating what the composer wrote on the page into something beautiful. While it is nice to see a soloist on stage without music, I feel we measure too many musicians by how well they memorize and now well they perform. I don't think it should matter if you have the sheet music in front of you or memorized.
44	While I don't personally have successful memorized performances, those that commit to this skill often have very musically expressive performances and appear liberated from the notes on the page.
45	How well do you REALLY know something if it isn't memorized?
46	I think that memorizing a piece of music helps you to truly learn all of the ins and outs of it.
47	Needed to memorize music for marching band; looks much better on the field than carrying flip folders.
48	Memorizing requires ultimate confidence in learned technical and musical decisions. It is not an exceptionally high priority for me personally, so I do not frequently require it as a teacher, but I can see its usefulness.
49	Nerves are almost an issue for performers, and getting to the point of having pure muscle memory behind the entire piece of music adds another level of competence and proficiency that is not there with purely relying on the sheet music. Especially in orchestra auditions, it is helpful to me to shut my eyes to help further calm myself and just play.
50	

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
51	I've always felt that my best performances are memorized - though the process of getting there is arduous, I usually end up seeing the music in my mind's eye differently than it is portrayed on the page. It helps me to fully connect with my version of the music if I'm playing from memory.
52	I find myself in a position of leading chant and other music programming where memorization as well as group improv are key. This is not taught in classical study as well as it should be.
53	It helps the music become more alive the more you're able to play from memory. Also, you can practice anywhere. Anytime.
54	I'm actually not sure if memorization is a valuable skill. I have no idea to what extent it impresses judges when it's not explicitly required. I suppose memorized excerpts are also handy to pull out if you're giving masterclasses or the like. However, I wonder if accessing and recalling memorized music takes up enough cognitive bandwidth to detract from other aspects of one's playing.
55	It means you've practice it so much you really know it. Frees you up to be expression
56	By memorizing solos and excerpts it helps me get away from just reading the music. I get a better sense of phrasing, and it helps me create a musical character, giving the music more emotion. It also requires you to connect with the audience, which is the whole reason we chose to perform for a living.
57	Not having to rely on looking at your music all the time to play your part allows you to pay better attention to the conductor and the other musicians makes you a better ensemble player. It also allows you to internalize the music better which gets your focus off of reading the music and more onto making music.
58	Even when using music, if you know the piece good enough that it's memorized, you can focus more attention to finer details without worrying about notes/rhythm/stuff on the page.
59	Memorization is handy because it is one less thing you need to worry about as a performer. Musicians are the ultimate multitaskers. But the more task one has to juggle, the less adequate one can be on each task. By taking one of those tasks away, you are leaving more room to focus upon musicality, precision, how your part fits into the music with others (if there are others), embellishing or improvisational skills, etc. Memorization also helps transfer the muscle memory built up over good practicing habits and will make you a better sight-reader and/or improv/jam player.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
60	I have seen great performances from wind players that were memorized and while I believe it may have contributed to their stage presence, I do not believe it is necessary most of the time for wind players. With the exception of international competitions.
61	When we are no longer shackled to the page, we can bring so much more of ourselves to the performance. It also eliminates the barrier between us and the audience that the music stand creates.
62	Memorization forces certain aspects to really become ingrained in the players mind. Phrasing, dynamics, technical passages all can benefit from memorization. I personally think the muscle memory is particularly important for the wind player so when nerves kick in, one can fall back on the memory. That being said when memorizing, make sure you start slow and learn it correctly because it is insanely hard to correct something if you memorize it wrong.
63	In order to know the piece as well as one should for a performance, they need to make the music part of themselves, which is being able to perform the music without the restrictions of reading music
64	It is a great skill to have, and can help when music is difficult. I find it beneficial to memorize excerpts, but I still read form the page during auditions. I don't think that memorization is crucial to having a good career in music, but can be helpful now and then.
65	Sometimes I feel that the notes and the physical presence of a music stand and sheet music hinders the musical experience. How is one to use 100% of one's attention, focus, and heart to perform a piece of music when so much energy and attention is spent on reading and interpreting what's on the page. My best musical moments have come when I'm no longer reading, and just letting the music flow through oneself.
66	Memorization in the right setting implies understanding.
67	I think it is important for performers to play from memory when necessary
68	Even if you wind up performing with the score in front of you, the process of memorization forces you to pay attention to every inch of the score, which can be great for boosting confidence and familiarity.
69	In my experience, memorizing can foster innate musicality and freedom to play expressively.
70	

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
71	Although it is not a necessity for every player, I think it's a good skill to have in a performance context. Personally, I always find when I am performing a piece from memory I am more emotionally involved than when I am reading music. It is consistently an enlightening experience to perform a piece of music from memory because you know the piece so well that you do not need the sheet music in front of you.
72	I believe memorized performances have the ability to be more communicative. Taking away the music stand removes yet another barrier between performer and audience. When performers know music by memory they more deeply know the inner workings of the musical phrases of that piece. Memorized performances, while riskier, have always been more rewarding to me.
73	Memorization allows you to follow the conductor better when in full ensembles.
74	Simply put, if you have the piece memorized, you really "know" it which is a bare minimum for effective performance. Once the piece is fairly second nature, you can focus on the artistic side of making music beyond simply playing the notes.
75	Printed music, in my opinion, is one of many ways to get a framework of a musical work. It should not be 100% relied upon during a performance. When I have a piece of music memorized, I feel more free to pay attention to my expressiveness through dynamics, phrasing, etc. I also feel that I can follow the conductor better and fit in with the ensemble better. To this day, I don't typically use printed piano music when learning a new piece - I'll listen to it and play it. Will my performance play 100% of the notes on the sheet music? Probably not.
76	Many situations--including concerto and recital performances and performances of pieces that require extramusical performance elements--require memorization. Aside from these practical uses, memorization helps a performer to connect more successfully with the audience and requires the performer to know the piece more completely.
77	
78	Memorization is also a test of well well you interpret your music. Your interpretation of music is also a recognition of your comprehension of your craft.
79	It's always convenient to have it memorized and I find it freeing to not look at sheet music and just feel the music.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
80	I think that memorization can be a valuable skill because you don't have to rely on what's in front of you. You can use your ears more while using your eyes less, and can make music more freely.
81	You truly can express the nuances of the music if you know it completely.
82	I think it is a good skill for performance effect. Sometimes, it might be better to play without music - or at least not being dependent on a piece of paper.
83	getting off score allows the performance a deeper involvement in the music and in the interaction of the players, if it's chamber music.
84	Memorization allows us to get rid of a barrier between the audience and the musician. It also shows high level knowledge of the music and helps give the performer freedom in performance.
85	
86	
87	Memorization is something that I'm going to keep challenging myself to do. Learning to play from memory sharpens preparation and details. It's also a thrilling feeling to perform without a music stand between you and the audience. I don't plan to memorize everything I do, but I would like to keep learning more music this way.
88	Memorization is one of many tools that encourages a deep familiarity with the literature and our instruments. I believe that memorization should be utilized as a way facilitate a more flexible interpretation, but it is often used to codify a specific, rigid, unchanging interpretation. The increase of memorization and decrease of improvisation in classical music throughout the 19th century severely limited the canon (because you can only memorize so much) and decreased the practice of improvisation (and ornamentation). Exceptions to this are: jazz and pianists because they both memorize and improvise.
89	Memorization is a thorough test of a musician's interpretive abilities - since written musical instructions won't be available in performance, the performer is forced to make decisions about every aspect of their performance ahead of time. This effectively forces the player to consider musical details with far greater scrutiny than would normally be necessary.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
90	I believe memorization looks impressive to an audience and can give the impression of an improvised performance, but I think it is more likely to create performances which LACK extemporaneous additions. Granted, this is probably not the case in all performances, for example with the most skilled of musicians, but as a pedagogical practice I think it can waste a lot of time that would be better used on other skills.
91	Though memorization is almost not ever necessary as a woodwind player, because for whatever reason we do not have the tradition of playing by memory that is seen with strings and piano (I would be interested to hear why this is - I have never been able to understand it. I understand why pianists have to memorize their music, because of the page turns issue, but why would string players have to memorize theirs and not wind players? There is no good reason for this that I can think of), I think it is a valuable skill. For one, it frees you to look at the conductor and your fellow musicians when you can take your eyes off the page. It allows you to focus on how you are sounding, because if you can reduce the amount of energy you put in to your visual sense, this frees up energy and focus that can be put toward your aural sense. If you are performing as a soloist, I think it results in a stronger connection with the audience, due to the lack of the physical barrier of the music stand. Finally, if you can play the music by memory, it ensures that you know every note of the piece intimately, which will always result in a better performance.
92	
93	Being freed from the music, and really knowing a piece helps to improve interpretation of the music.
94	I can see why it can be both valuable and useless, but I find that memorizing works for performance help with performing other works - if I'm not concerned with the notation of a C#dim7 arpeggio (for example) it just becomes natural for me to play it, and then if I see an Edim7 arpeggio in a different piece (same chord but inverted), then my brain just jumps to the muscle memory and I play it fine.
95	I often end up memorizing music because then I don't have to carry my music everywhere with me. Plus, memorization allows you to focus on tone and musicality rather than notes alone.
96	When it is memorized, it is in your head much more than if you were just reading it. It helps you know the piece to a much higher level. And you never know when you might be in a situation where you will have to memorize something, so it's a good skill to keep sharp.
97	You can always practice something you've memorized, with or without music, and physically or mentally.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
98	When I memorize I realize things about the music that I didn't when I was just reading and I know the piece better overall.
99	Anything that allows you to get out of the stand and off the page is good for musicality. You have to be able to make split second decisions about interpretation etc. Especially since I am trained in early music (baroque, renaissance, etc) which is supposed to be improvised differently each time. This also applies to jazz--playing off each other's solos requires an intimate understanding of what was written in order to get past it.
100	Even if not required for performance, memorizing music is a sign of truly knowing the piece of music and being confident in that knowledge.
101	I don't think it can truly be taught except through repetition of correct passages. Photographic memory has been a help but more so has been slow practice that trains the fingers and ears, and the larger musical shapes and colors come with polishing and refining. Long term practicing can lead to memorization as a byproduct but it shouldn't be the end goal.
102	Being an orchestral musician, there is little need in my own professional life for memorization.
103	Gives you the chance I interact more with the audience and you are not counting on looking at the page.
104	Where i live there are a lot of street performers. Obviously they are not going to bring their music stands and sheet music with them, so in this city it is a valuable skill.
105	To memorize something removes all barriers between you and the music itself. There are no more crutches or walls to hide behind. You truly make the music your own and are distraction free to focus on your musical representation. I teach and have students memorize short chunks to help them achieve this, but maybe now I'll have them memorize more music.
106	Taking the music away from the piece of paper allows me to truly hear what I'm doing. Most of the things that I feel best about playing are the things that I have memorized to a certain extent.
107	For competition/ recital/ more freedom to really get into the music
108	Stressful and highly rewarding.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
109	I think memorizing the feeling of what you're playing - burning the patterns into you so you can focus on musical aspects enables the performer to do amazing and spontaneous things. I think reading notes limits our possibilities to express what we are feeling in the moment.
110	Confidence of not being reliant upon the music. Allows for stronger connection to the music and greater expression. Ensures that you REALLY know the music. Allows you to remove "barrier" between you and audience. Not being able to memorize even excerpts indicates one doesn't really know the music, anyway.
111	Although I've never experienced it, I believe that it can allow you to feel more connection with what you are doing and ownership of the music. It also definitely adds a level to what you can do to include the audience while you are performing.
112	It helps me 'let go' of the technique and really focus on the music!
113	When playing memorized, I perform much more musically. I don't even know how to put a number on it - maybe 1000% more musically? :) It's night and day. It's become one of the single biggest things I do to make sure I'm playing a piece at the highest level possible for me.
114	It can make practice more efficient.
115	It can help as you get older I believe, especially as you are "re-learning" music.
116	
117	Memorization takes away the visual stimulus and allows one to completely and fully listen and play from one's heart. Reading music on paper is hard to do without a little bit of as-you-go analysis, and taking the music away frees the creative mind.
118	As I stated earlier, usually I memorize pieces that I work on without specifically trying to memorize them. However, the pieces that I had to play from memory have stuck with me very well over the years. I find that I can still pick up my instrument and play through large chunks of the music from a 20-minute concerto that I memorized and performed 4 years ago. Memorization seems to internalize the music in a way that playing from the score alone does not. Also, during performances, playing from memory can be a very freeing experience. It draws the audience in and makes a performance feel more like theater than the somewhat stiff atmosphere typical at classical music performances.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
119	Memorization is a vital practice. I feel that one cannot perform well until the music is entirely in the body and memorized. Whether or not you use a score during performance, one must know every detail of the score fully, and I feel that memorization is an amazing tool. In the early music world, it has become sort of taboo to memorize, but I think that this is a particularly damaging and reactionary habit of the genre. At the moment, I'm exploring memorized chamber music. Of course this takes a very special combination, but it is plausible. It adds another dimension to performance.
120	Although it is difficult and stressful, i found that performances without music are much more fulfilling. Once you have a piece solidly memorized you can immerse yourself in the music and be completely present during the performance.
121	It can help approach the music in a different way. If you memorize something properly, you can really express yourself without the "box" of following what is on the page. Also, I play in the Navy and we use flip folders and lyres all the time, which are very heavy and awkward to play with. It is useful to memorize songs that we play a lot because then you don't have to use a flip folder! My thumb thanks me for the pieces I have memorized.
122	Too much reliance on notation can constrain musicality.
123	
124	It's a valuable skill, but not one that should be forced on students unwilling to do it. I think it is mostly a required skill for an instrument like piano, in which it is helpful to be able to look at your hands and not have to look at the music. (I took secondary piano lessons for many years!) If I can help in any other way feel free to contact me! Jason Shafer Principal Clarinet, Colorado Symphony Orchestra JShafer@coloradosymphony.org
125	I think memorization is helpful, if you can play it memorized, you take yourself away from looking at the sheet music and give yourself the freedom to focus on the music. That said, I think it should be a practice tool and not a performance requirement. Some people may prefer to perform memorized and that's fine.
126	It helps in learning to play extensive passages. If you have things memorized, you don't need to get caught up in reading music. It is also extremely beneficial in solo settings.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
127	In college I never memorized music for a solo performance. This way I could focus on a good performance and not perform hesitantly because of an unsure memory.
128	I can always be better at memorizing - I did have a lapse at a jury and I don't care to repeat the experience.
129	Promotes musicality to have music memorized rather than reading them
130	I found that the effort to memorize things correctly forced me to learn technical passages more thoroughly and I played more expressively when my head wasn't buried in the page.
131	I think that memorizing is an excellent skill. It can help you concentrate on the music and expression. It also vanishes a barrier between the performer and the audience. Unfortunately, due to anxiety that it brings me, I never play in a concert/audition from memory.
132	Although I studied the flute I am now a singer. I memorize music very quickly and easily, and so I am more hireable as a choral singer in particular. I also have had success in my career because I could take an audition or fill in for someone last-minute by memorizing music quickly.
133	It can help to really get to know a piece of music on a deeper level, however I feel more secure and musical with the music in front of me
134	
135	For many performances, the audience expects music to be memorized.
136	Necessary for concerto performances, teaching masterclasses effectively, etc. Also realistic for knowing the piece to the point that a performance will go well. I don't think that memorized performing should be a mandate, but the ability to do so is an important checkpoint for assessing whether one truly knows a piece of music. When performing from memory, it's also possible to focus on extraneous details (dynamics, blend, etc.) than when playing using notations.
137	You must know the piece (both your part and other parts) very well in order to memorize it. Even if you choose not to perform from memory (as I generally do), memory cements notes/rhythms/etc., and gives you more freedom to explore phrasing and structural ideas.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
138	Personally, as a kid I found sight reading difficult and memorized the music so that I would not have to struggle through counting the ledger lines. As a result, I struggled with sight reading, especially when I started playing bassoon in ensembles. Both skills are important. I personally feel like I can focus better on the music when I am not looking at the part.
139	I think it's more professional, especially for solo performances. Also, it allows the musician to really put emotion into it when he/she is not preoccupied by reading the notes.
140	I believe that if you can't play the passage or piece from memory, you haven't really mastered it. This doesn't mean that you have to go on stage without the music, but if you really know the music, then you are probably more likely to perform with confidence and artistic freedom.
141	I think memorizing music can facilitate conception/understanding of phrases and form. It can encourage variations or experiments in musical decisions. I think it can help a performer engage the audience. I think it can create an understanding that music has auditory, intellectual, muscular, and bodily connections. I also think the effort to memorize something is valuable, I mentioned that a bit above with staying focused and calm.

ID	17. Please explain your previous answer, do you think memorization is a valuable skill?
142	Memorization is simply essential to my ability to perform on dual 3-octave sets of handbells as a soloist. However, as a music educator, I consider memorization an important tool to be used within the greater approach of "knowing the music." Some of my colleagues resist the term "memorization." They would say that if one studies his or her music closely enough and deeply understands it, the musician would be able to perform it without referring to the score. My colleagues distinguish that deep comprehension from rote memorization, and some say that memorizing as an active act is counterproductive to developing deep understanding. For me, that distinction is semantics. Students early in their studies, and casual students at all levels, do not (yet) know how to deeply understand music. Telling these people to "deeply know" the music instead of "memorizing" it would just frustrate them. Yet, "memorizing" can also cause terror. So my approach with this population is to engage in conversation about what they think the meaning of the music is. I ask about why they think the composer did this or that. I encourage debate followed by some consensus. Then, starting with the final phrase, I ask them to try it together using the interpretation they've agreed upon. With just a couple repetitions, they suddenly can play it with their eyes closed (requiring them to listen to one another rather than watch a conductor). Then we work on the previous phrase, and the one before, until we have entire sections of the piece. The result is a deeper understanding of the music and the ability to play it without referring to the score. The students are stunned that they just "memorized" the music, often because they are convinced that memorization was impossible for themselves. In the end, they may even perform with the scores in front of them, but they are so much more cognizant of what they are doing together. The key point: The use of memorization in this case was to force the students to focus on the making of the music instead of the reading of the parts.


music
play
memorize
memory
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repetition
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memorization
sections
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recordings
small
without
memorized
chunks
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practice
much
techniques
together
tactics
playing
memorizing
Listening
backwards
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start
instrument
work
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Repetition
performance
add
suggested
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